



West of Wales SMP2

Strategic Environmental Assessment (SEA) Report

Pembrokeshire County Council

November 2010

Environmental Report

9T9001



HASKONING UK LTD.
ENVIRONMENT

Stratus House
Emperor Way
Exeter, Devon EX1 3QS
United Kingdom
+44 (0)1392 447999 Telephone
+44 (0)20 722202659 Fax
info@exeter.royalhaskoning.com E-mail
www.royalhaskoning.com Internet

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Drafted by Randolph Velterop, Peter Brunner
Checked by Peter Thornton
Date/initials check ...PT..... ...17.11.2010....
Approved by Peter Thornton
Date/initials approval ...PT..... ...17.11.2010....

The key contact for the SMP is **Emyr Williams**. Responses should be sent by email to Emyr.Williams@pembrokeshire.gov.uk or to the following address:

**c/o Emyr Williams
Pembrokeshire County Council
County Hall
Haverfordwest
Pembrokeshire
SA61 1TP**

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NON-TECHNICAL SUMMARY

What is an SMP?

A Shoreline Management Plan (SMP) is a large-scale assessment of the risks associated with coastal processes and aims to reduce the risks to the social, economic, natural and historical environment through effective and sustainable shoreline management. A SMP aims to manage risk by using a range of methods which reflect both national and local priorities, to reduce the threat of flooding and erosion to people and their property, as well as benefiting the environment, society and the economy in line with the Government's 'sustainable development principles'.

West of Wales

The West of Wales SMP2 covers the coast and mainland from St Anne's Head and Ynys Enlli to the Great Orme's Head and includes the Isle of Anglesey. Including estuaries, the total length of the coast within the West of Wales SMP2 study area is approximately 460km.

Wales is a mainly mountainous country with relatively small areas of coastal plain and lowland valleys, covering 2.078 Million (M) hectares (ha) (around 20,000km²), and has a coastline of approximately 1,280km in total length. The West of Wales coastline is diverse in character from urban seaside resorts, working harbours and ferry ports, to small rural communities and isolated stretches of coast. The coastline hosts spectacular unspoilt rugged scenery with tall sea cliffs, prominent headlands, small bays with sandy or shingle beaches, caves, rock stacks and areas of prominent sand dunes. Much of the coastline is designated as Heritage Coast and is of significant cultural, historic and geological value. There are several islands off the coastline, the largest being Anglesey in the northwest. The SMP2 study area includes coastline and valleys within the Counties of Anglesey, Ceredigion, Conwy, Gwynedd, Pembrokeshire, and Powys.

The Cardigan Bay coast is formed from well-bedded Ordovician and Silurian shales and sandstones. Larger wind waves and oceanic swell move from the southwest to the northeast in the Irish Sea through St Georges Channel. Exposure to waves varies throughout the study area, with Pembrokeshire sheltering some southern parts of Cardigan Bay and this protection is enhanced in local areas by the numerous rocky headlands such as Strumble Head and Cemaes Head. Along the south side of the Llyn Peninsula the coast becomes more exposed to the large waves from the south west.

The most notable commercial ports along within the study area are Holyhead and Fishguard. The largest urban area is the city of Bangor, located in the north, with a population of over twenty-one thousand.

Provision of a SEA for the SMP

The provision of a Strategic Environmental Assessment (SEA) for SMPs is not a statutory requirement; the driver for SEA provision is Government policy with the intent being to ensure that the process is transparent and has due regard to the coastal environment. Under Directive 2001/42/EC of the European Parliament and European Council on the assessment of the effects of certain plans and programmes on the environment, a SEA must be undertaken for plans and programmes that are required by legislative, regulatory or administrative provisions. The Welsh Assembly Government (WAG) has determined that SMPs are plans that can influence development and thus should be subject to the requirements of the SEA Regulation. The SEA provides a systematic appraisal of the potential environmental consequences of high-level decision-making; by addressing strategic level issues, the SEA process shapes the selection of the preferred option. It also directs individual schemes towards the most appropriate solutions and locations as well as helping to ensure that resulting schemes comply with legislation and other environmental requirements.

The SEA is therefore intended to ensure that consideration of the socio-economic and environmental issues relating to the coast have been central in the development and evaluation of policy. Within the SEA process and in a manner analogous to that used throughout the SMP process, the term 'environment' has been used to cover the following receptors:

- Population & communities (including human health, critical infrastructure etc);
- Cultural heritage, including architectural and archaeological heritage;
- Material assets;
- Biodiversity, fauna and flora;
- Soil, Water, Air;
- Climatic factors; and
- Landscape.

The Assessment

The assessment has been provided for the suite of policies contained within the SMP and outlined in **Chapter 4** of the Environmental Report (ER).

The SEA process has developed two distinct and key documents; a Scoping and an Environmental Report. The Scoping Report (**Annex E**) established an environmental baseline for the West of Wales shoreline and through doing so developed a series of SEA assessment criteria, by which the SMP policies could be assessed. The Scoping Report underwent a five week consultation period with the West of Wales SMP Client Steering Group comprised of statutory consultees, including the appropriate local authorities and government agencies such as: Pembrokeshire County Council, Ceredigion County Council, Pwys County Council, Gwynedd County Council, Eryri National Park Authority, Pembrokeshire National Parks, Welsh Assembly Government (WAG), HENEB, Network Rail, Countryside Council for Wales, RCAHMW, Dyfed Archaeology, and the Environmental Agency Wales (EAW).

Following the consultation period and the provision of feedback by the statutory consultees, the environmental assessment of preferred SMP policy was undertaken using the SEA objectives and indicators agreed through the consultation period; with this report being the summation of that process. Key environmental issues identified through the Scoping Report on West of Wales shoreline are as follows:

- To maintain and support the main centres of economic activity by preventing or minimising economic losses through reducing coastal erosion and coastal flooding to residential, commercial and industrial property.
- To prevent or minimise economic losses by reducing coastal erosion and coastal flooding to infrastructure and thus maintaining national and regional connectivity.
- To prevent or minimise economic losses by reducing coastal erosion and coastal flooding to agricultural land.
- To prevent or minimise coastal erosion and coastal flooding to community assets (including beaches).
- To prevent or minimise deterioration to health and health impacts resulting from coastal flooding.
- To achieve “good ecological status” for the freshwater and marine environment under the European Commission (EC) Water Framework Directive.
- To identify opportunities to maintain and improve the natural environment and processes by managing the risk from floods and coastal erosion.
- To prevent or minimise coastal management interventions that have an adverse impact on the geomorphological and geological interest of the coast or the supply and downdrift of sediment.
- To protect and enhance heritage assets such as Scheduled Monuments, Historic Parks and Gardens, Listed Buildings, and Conservation Areas.
- To protect and enhance the high quality landscape and visual amenity (e.g. AONB and Heritage Coasts).
- To enable existing habitats and species to adapt to a changing climate.

The methodology used to identify and predict the significant likely environmental effects related to implementing the West of Wales SMP involved the use of an evidence-based, expert judgement system based on the widely accepted Source-Pathway-Receptor model (SPR). Due to the intricate and multivariate nature of SMPs, the appraisal took the form of a qualitative assessment based on professional judgement, GIS analysis and supported by peer-reviewed literature, with the outcomes being scored within seven categories between major positive and major negative.

The assessment has been provided at two levels:

- 1) Primary analysis of each Policy Development Zone (PDZ) which includes a detailed assessment at the policy unit (PU) level associated with the four different policy development options including holding of the existing defence line (HTL); advancing the existing defence line (ATL); managed realignment (MR) or no active intervention (NAI); and
- 2) Secondary analysis which seeks to establish the overall effects at the PDZ level and the plan as a whole, taking into consideration the overall long-term policy development option / plan.

The primary analysis was recorded on a series of detailed assessment tables which fully documented the effect of SMP policy for all units within each PDZ with regards to the assessment criteria. A full detailed record of this primary assessment is provided in **Annexes A to D**, however it should be noted that these assessments could change following consultation and any subsequent alteration to policies. In addition to providing the results of this assessment, the Environmental Report also provides monitoring and mitigation measures to ensure that the effects of the SMP on the West of Wales shoreline are minimised as far as possible. The specification of monitoring and the actions to enact the monitoring requirements will be included within the SMP Action Plan. This approach provides the most robust mechanism for delivery, since the SMP Action Plan is a) directly linked to SMP delivery and b) builds on the organisational roles developed within the SMP process.

Conclusions

The key drivers for the development of SMP policy was to support the diverse character of the landscape and seascape of the coastline through the natural evolution of the shoreline wherever possible, balanced against the desire to not constrain the ability of coastal settlements to retain their viability and core values and manage and adapt to flood and erosion risks. In pursuit of the provision of this balance, the SMP has devised a strategic approach to management, which focuses on the holding of locations which are key features / receptors, while enabling the natural evolution of the coast in areas elsewhere. A further complexity has been the need to sustainably manage coastal habitat which has responded to previous coastal management practice. It is in providing this balance that localised conflicts occur. By maintaining the protection of historic settlements, Listed Buildings and coastal communities, the potential exists for adverse effects on coastal habitat to arise from factors such as coastal squeeze and the limiting of sediment movement along the coast and geological exposure of cliffs. While in contrast by allowing natural processes to prevail essential for geological features for example, there is potential risk to the historic environment through erosion.

On the basis of this SEA, the West of Wales SMP has focussed on providing this balance. Out of approximately 5000 individual assessments of key interest features (see **Annex A to D**), the majority of adverse effects related to biodiversity, flora and fauna is associated with maintaining the protection of historic settlements, coastal communities / settlements and material assets through such policies as HTL or MR. These policies will involve significant loss of important or threatened habitats and species associated with Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and Ramsar Sites including the following:

- Pembrokeshire Marine SAC (loss of intertidal sandflat);
- Llyn Peninsula and the Sarnau SAC (loss of intertidal sandflat, saltmarsh);
- Dyfi Estuary SPA (loss of improved grassland);
- Cors Fochno and Dyfi Ramsar;
- Menai Strait and Conwy Bay SAC (loss of intertidal sandflat and mudflat);
- Lavan Sands, Conwy Bay SPA; and
- MGIannau Mon: Cors heli / Anglesey Coast: Saltmarsh SAC (loss of intertidal mudflat).

In total up to **452ha** of habitat may be lost through lack of available adaptation area for intertidal and terrestrial habitats during sea level rise in response to coastal squeeze associated with current defences, infrastructure or local topography. This will potentially require mitigation through the creation of equivalent habitat elsewhere and a large amount would be offset by the MR policies as well as compensatory habitat. Similar to the *Natura 2000* Sites of this PDZ, there is potential for the habitat interest features associated with the Special Sites of Scientific Interest (SSSIs) and Biodiversity Action Plans (BAPs) such as sandflats and saltmarsh to be restricted in their natural development. However, the policy of MR along some sections could create additional habitat (e.g. intertidal sandflats) over the long term and reduce the scale of the potential impacts over the first and second epochs. Key preventative and mitigation measures have been identified for the West of Wales in this ER associated with biodiversity, flora and fauna.

For the water environment, the separate Water Framework Directive (WFD) assessment addressed the impacts of proposed policies under the SMP on the four WFD Environmental Objectives for the freshwater, transitional, coastal and groundwater bodies. Nine of the 20 PDZs were identified as having the potential to contribute to a failure to meet Environmental Objective WFD 2, 3 and 4.

The preferred policies of NAI or MR have been recommended in areas where there are limited human assets or along areas of undeveloped coastline, which amongst other things ensures the preservation of the geological interests and nationally designated geological sites. For example, NAI policies around the much of the open coast in particular those sections which are GCR or Coastal Heritage will ensure that geological exposure continues. However the same policies which promote long term erosion or deposition (NAI or MR) will invariably impact upon the recorded and unknown historic environment, as the coverage of the coastal heritage resource is so extensive. Key heritage sites which should be investigated through an established monitoring regime have been included in this ER.

The SMP has aimed to protect major infrastructure, commercial and industrial areas and material assets (e.g. ports, harbours, ferry links, major roads, rail, sewage treatment works, industrial depots, etc) for the entire SMP period, where economically viable to do so. Infrastructure affected by MR or NAI is not strategic and its loss can be relatively easily mitigated at a local level for example relocation or realignment. For example, the MoD Royal Aircraft Establishment at Aberporth (PU 6.1) will be impacted upon through damage or loss by the policy of NAI, however, mitigation could be achieved through re-location of parts of the airbase.

The plan provides for protection from erosion and flooding to a significant amount of properties and assets. Under the recommended policies the great majority residential and commercial assets will be protected, although the some assets may be impact upon by increased erosion and flood risk within the PDZs along the West of Wales. However, in response to predicted sea level rises, there is the potential need for relocation of some communities in the future.

The SMP can therefore be concluded to have provided a range of benefits to the social and economic values of the West of Wales shoreline and where moderate or major negative effects have been identified in particular associated with biodiversity, flora and fauna; heritage and assets, mitigation and management measures have been devised to address these effects where possible.

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CONTENTS

		Page
1	INTRODUCTION AND BACKGROUND	1
	1.1 West of Wales Shoreline Management Plan (SMP)	1
	1.2 The SMP context for the SEA	1
	1.3 Why are we using Strategic Environmental Assessment (SEA)	2
	1.4 Scope and Structure of this Report	4
	1.5 Aims and Objectives of the West of Wales SMP2	5
	1.6 Implications of SMP Policy on Environmental Receptors	11
	1.7 Consultation	12
	1.8 Synergies with Other Parallel Processes	13
	1.9 Evaluation of the Plan and Alternatives	13
2	CONTEXT AND METHODOLOGY	15
	2.1 Alternative Options and Policy Development Zones (PDZs)	15
	2.2 Methodology of the West of Wales SMP2	15
	2.3 Mitigation and Monitoring	17
	2.4 SEA Objectives	17
3	STUDY AREA	21
	3.1 Definition of Study Area	21
	3.2 Baseline Environment Summary	21
	3.3 Key Environment Issues	22
4	STRATEGIC ENVIRONMENTAL ASSESSMENT	35
	4.1 Assessment Methodology	35
	4.2 Primary Trends of the PDZs	62
	4.3 WFD Assessment	101
	4.4 Cumulative Assessment	102
	4.5 Conclusion	110
5	MONITORING AND MITIGATION	113
	5.1 Introduction	113
	5.2 Habitat Monitoring and Management	113
6	THE NEXT STEPS IN THE SEA PROCESS	117
	6.1 Consultation Responses	117
	6.2 The Purpose of the Consultation	117
	6.3 Subsequent Documents	117
7	REFERENCES	119
8	ABBREVIATIONS AND ACRONYMS	121
9	GLOSSARY OF TERMS	123

ANNEX A - DETAILED ASSESSMENT TABLES FOR MATERIAL ASSETS AND BUILT HERITAGE	129
ANNEX B - DETAILED ASSESSMENT TABLES FOR NATURA 2000 SITES	131
ANNEX C - DETAILED ASSESSMENT TABLES FOR SITES OF SPECIAL SCIENTIFIC INTEREST	133
ANNEX D - DETAILED ASSESSMENT TABLES FOR BIODIVERSITY ACTION PLAN HABITATS	135
ANNEX E - SEA SCOPING REPORT	137
ANNEX F – CONSULTATION RESPONSES AND ACTIONS/RESPONSE FOLLOWING CIRCULATION OF THE DRAFT ENVIRONMENTAL REPORT	139

TABLES

Table 1.1	Options used in SMP Development	8
Table 1.2	Potential Generic Implications of Each SMP Option.....	9
Table 1.3	SMP and SEA Terminology	11
Table 2.1	Significant Criteria used in the Assessment of Impacts.....	16
Table 2.2	West of Wales SMP2 Sustainability Objectives and Indicators	18
Table 3.1	Key Historical Sites that are at Risk of Erosion Throughout the 3 Epochs under NAI or MR Scenarios	31
Table 4.1	Comparison of SEA Objectives against and within SEA Objectives	37
Table 4.2	Achievement of SEA Objectives across the SMP	40
Table 4.3	Achievement of SEA Objectives for PDZ 1 - St Anne's Head to Borough Head.....	42
Table 4.4	Achievement of SEA Objectives for PDZ 2 - Borough Head to Dinas Fach	43
Table 4.5	Achievement of SEA Objectives for PDZ 3 - Dinas Fach to Pen Anglas.....	44
Table 4.6	Achievement of SEA Objectives for PDZ 4 - Pen Anglas to Pen-y-Bal	45
Table 4.7	Achievement of SEA Objectives for PDZ 5 - Pen y Bal to Cardigan	46
Table 4.8	Achievement of SEA Objectives for PDZ 6 - Pencribach to New Quay Head.....	47
Table 4.9	Achievement of SEA Objectives for PDZ 7 - New Quay Head to Llanina Point	48
Table 4.10	Achievement of SEA Objectives for PDZ 8 - Gilfach to Llanrhystud	49
Table 4.11	Achievement of SEA Objectives for PDZ 9 - Carreg to Sarn Gynfelyn	50
Table 4.12	Achievement of SEA Objectives for PDZ 10 - Upper Borth to Tonfanau.....	51
Table 4.13	Achievement of SEA Objectives for PDZ 11 - Tonfanau to Mochras	52

Table 4.14	Achievement of SEA Objectives for PDZ 12 - Mochras to Pen ychain.....	53
Table 4.15	Achievement of SEA Objectives for PDZ 13 - Pen ychain to Trwyn Cilan	54
Table 4.16	Achievement of SEA Objectives for PDZ 14 - Trwyn Cilan to Carreg Ddu.....	55
Table 4.17	Achievement of SEA Objectives for PDZ 15 Carreg Ddu to Trwyn y Tal	56
Table 4.18	Achievement of SEA Objectives for PDZ 16 - Trwyn Dylan to Llanfairfechan.....	57
Table 4.19	Achievement of SEA Objectives for PDZ 17 – Pen-y-parc to Penrhyn (Holyhead).....	58
Table 4.20	Achievement of SEA Objectives for PDZ 18 – Penrhyn (Holyhead) to Porth Helygen (North Anglesey)	59
Table 4.21	Achievement of SEA Objectives for PDZ 19 - Porth Helygen to Trwyn Penmon (including Puffin Island)	60
Table 4.22	Achievement of SEA Objectives for PDZ 20 - Llanfairfechan to Great Orme’s Head	61
Table 4.23	Summary of the Policy Units that have the Potential to Fail the WFD Environmental Objectives	102
Table 4.24	Summary of Secondary, Cumulative and Synergistic Issues for each SEA Receptor	103
Table 4.25	Summary of existing mudflat, sandflat and saltmarsh BAP habitat areas in the study area and potential areas at risk by epoch	110
Table 5.1	Summary of PDZs where Adverse Effect on Integrity of International Sites is Predicted, Showing Habitat Types Effected and Likely Extent	114

FIGURES

Figure 1.1	SEA Process within the Development of an SMP	1
Figure 1.2	SEA Approach and Stages undertaken for this SMP	3
Figure 1.3	West of Wales Study Area and PDZ.....	7
Figure 2.1	The Source-Pathway-Receptor models as applied to SEA	15
Figure 3.1	West of Wales PDZs 1 to 7 Showing Designated Sites.....	23
Figure 3.2	West of Wales PDZs 7 to 14 Showing Designated Sites.....	24
Figure 3.3	West of Wales PDZs 14 to 20 Showing Designated Sites.....	25
Figure 3.4	West of Wales PDZs 1 to 7 Showing Historic Sites and Infrastructure	26
Figure 3.5	West of Wales PDZs 7 to 14 Showing Historic Sites and Infrastructure	27
Figure 3.6	West of Wales PDZs 15 to 20 Showing Historic Sites and Infrastructure	28

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1 INTRODUCTION AND BACKGROUND

1.1 West of Wales Shoreline Management Plan (SMP)

1.1.1 This report is the Strategic Environmental Assessment (SEA) Environmental Report (ER) for the second West of Wales Shoreline Management Plan (SMP).

1.2 The SMP context for the SEA

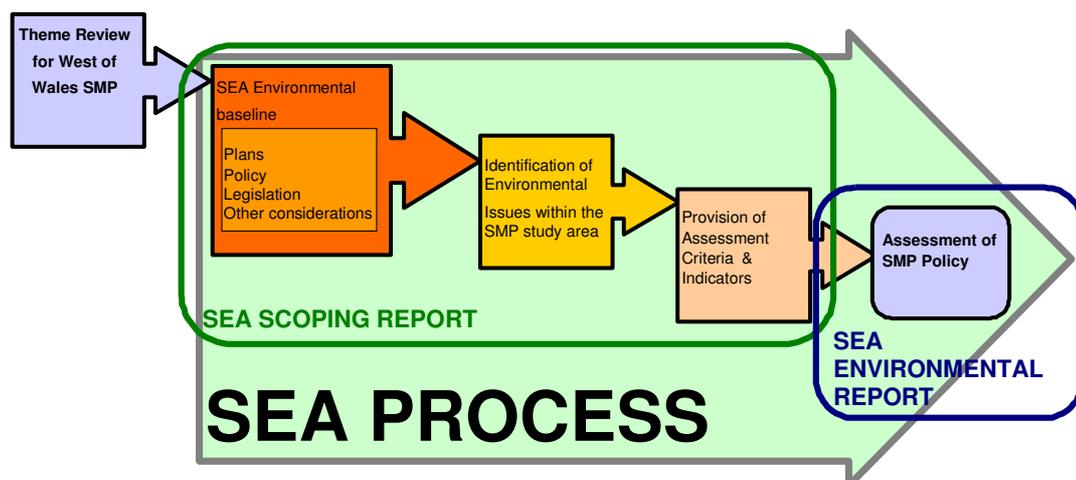
1.2.1 The SEA process to accompany the SMP is intended to make sure that considering the environmental issues relating to the coast is central to developing and evaluating policy. This Environmental Report (ER) provides the means to support a structured evaluation of the environmental issues relating to the West of Wales coast based on using the assessment criteria that were developed in the Scoping Report. Report (which can be viewed at <http://www.westofwalesmp.org/>). In this SEA draft Environmental Report, the preceding Scoping Report and in a manner comparable to that used throughout the SMP process (Defra, 2006a, 2006b) the term 'environment' is used to cover the following receptors (as defined by SI 1633):

Receptors

- Biodiversity, fauna and flora.
- Population and communities (including human health, critical infrastructure etc).
- Material assets.
- Soil, water, air, and climatic factors.
- Cultural heritage, including architectural heritage and the historic environment.
- Landscape.

1.2.2 The role of this report within the SMP SEA process is presented in **Figure 1.1**.

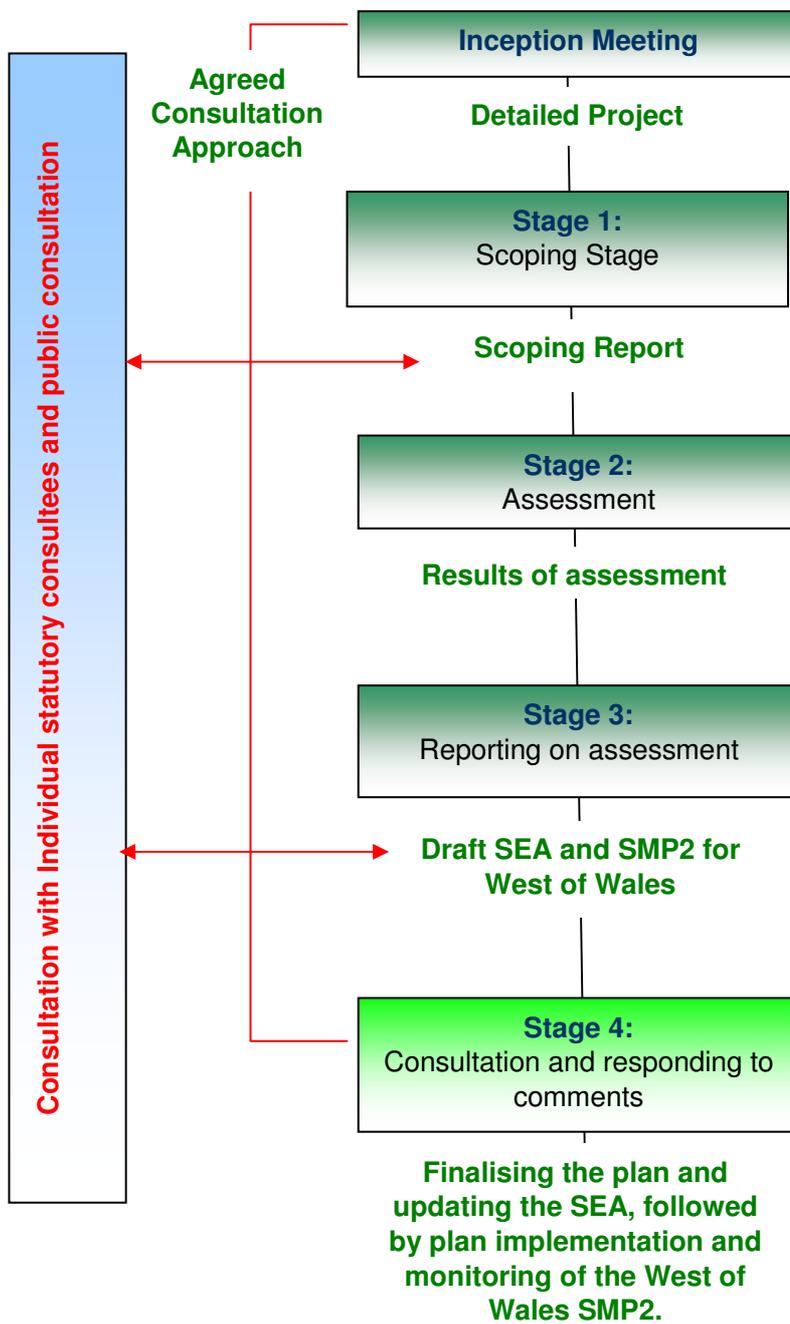
Figure 1.1 SEA Process within the Development of an SMP



1.3 Why are we using Strategic Environmental Assessment (SEA)

- 1.3.1 Shoreline Management Plans are being endorsed by The Welsh Assembly Government (WAG), who has determined that SMPs are plans that can influence development and thus should be subject to the requirements of the SEA Regulation.
- 1.3.2 SEA provides a systematic appraisal of the potential environmental consequences of high-level decision-making (i.e. plans, policies and programmes). By addressing strategic level issues, SEA aids the selection of the preferred options, directs individual schemes towards the most appropriate solutions and locations and helps to ensure that resulting schemes comply with legislation and other environmental requirements.
- 1.3.3 Under Directive 2001/42/EC of the European Parliament and European Council on the assessment of the effects of certain plans and programmes on the environment, an SEA must be undertaken for plans and programmes that are required by legislative, regulatory or administrative provisions. SMPs set a clear framework for future development and have much in common with the kind of plans and programmes for which the Directive is designed, although it must be noted that SEA is not a statutory requirement for SMPs and that this is therefore not a statutory document.
- 1.3.4 The second generation SMPs set a framework for future planning decisions, and have the potential to result in significant environmental effects. Thus, in accordance with WAG and Defra SMP guidance (Defra, 2006a, 2006b) the environmental effects of all policies must be considered before deciding which policies will be adopted. Consideration should be given to both the positive and negative effects of options on wildlife and habitats, populations and health, soil, water, air, climate factors, landscape, cultural heritage and the intrinsic relationship between these. As a result, Defra has recommended that assessment of SMP policies using the approach described in the Directive is adopted. The legislative act which transposes the Directive into domestic law is the Environmental Assessment of Plans and Programmes Regulations (SI 1633, 2004).
- 1.3.5 The main aim of the EU Directive is to *"provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development"*.
- 1.3.6 The approach undertaken for the SEA of the West of Wales SMP2 is based on several key guidance documents, namely: Environmental Assessment of Plans and Programmes (Wales) Regulations 2004, the Office for the Deputy Prime Minister (ODPM, 2005) guidelines, the Defra Guidance on SEA (2004), Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners (Countryside Council for Wales, English Nature, Environment Agency, Royal Society for the Protection of Birds, 2004), and TAN 5 - Nature Conservation Planning (WAG, 2009).
- 1.3.7 This document represents the Stage 3 in the process and approach of providing an SEA for the West of Wales SMP2 (**Figure 1.2**).

Figure 1.2 SEA Approach and Stages undertaken for this SMP



1.4 Scope and Structure of this Report

- 1.4.1 This report comprises seven chapters and three annexes, of which this introduction forms Chapter One.
- 1.4.2 The purpose of this report is to build on the content and findings of the Scoping Report and clearly express the manner in which the SMP is likely to affect the key environmental issues and associated receptors of the West of Wales shoreline.

The chapters within this SEA Environmental Report are as follows:

Chapter One introduces this document and sets the context for the use of SEA within the SMP process. In addition, this chapter explains the rationale behind the SMP itself and describes potential implications of the SMP on the wider environment;

Chapter Two describes the context and methodology for the SEA, including prediction and evaluation methodology as well as data gaps and uncertainties;

Chapter Three provides a summary of the study area covering parameters considered for the SEA;

Chapter Four presents a summary of the assessment of the SMP at a PDZ unit level and PDZ management area level, and draws conclusions relating to the overall effects of the plan;

Chapter Five provides an account of mitigation and monitoring measures required to address uncertainties or adverse effects of the SMP;

Chapter Six provides details of the next steps to be taken in the SEA process including details for consultation;

Chapter Severn provides the references for the study;

Annex A presents a detailed assessment of SMP Policy, in the form of assessment tables for the material assets, community, and historic environment features;

Annex B presents a detailed assessment of SMP Policy, in the form of assessment tables for the Natura 2000 Sites;

Annex C presents a detailed assessment of SMP Policy, in the form of assessment tables for the Sites of Special Scientific Interest;

Annex D presents a detailed assessment of SMP Policy, in the form of assessment tables for the Biodiversity Action Plan Habitats; and

Annex E presents the Scoping Report which includes a baseline environment for the West of Wales.

1.5 Aims and Objectives of the West of Wales SMP2

- 1.5.1 A Shoreline Management Plan (SMP) is a non-statutory policy document that provides a consistent approach to the high level assessment of the risks over the next 100 years from flooding and coastal erosion (taking into account cliff stability). It needs to take account of existing defences and the natural and built environments, and be compatible with adjacent coastal areas. An SMP aims to manage risk by using a range of methods which reflect both national and local priorities to reduce the threat of flooding and erosion to people and their property and benefit the environment, society and the economy as far as possible, in line with the Government's 'sustainable development principles'.
- 1.5.2 The West of Wales SMP2 study area originally assessed by the Shoreline Management Partnership (Cardigan Bay Coastal Group; Gwynedd Council and Conwy County Council) and assessed the following coastline: St Anne's Head to Teifi Estuary; St David's Head to Bardsey Sound; Dyfi Estuary to Aberdaron and Ynys Enlli to the Great Orme Head. These were completed in the early 2000s and have now been amalgamated into one SMP for the first review – West of Wales SMP2.
- 1.5.3 The objectives of the West of Wales SMP2, which are based on the Shoreline Management Plan Guidance Volume 1: Aims and Requirements (Defra, 2006a), will aim to:
- Set out risks from flooding and erosion to people and developed, historic and natural environment within the SMP2 study area;
 - Identify opportunities to maintain and improve the environment by managing the risks from floods and coastal erosion;
 - Identify the preferred policies for managing risks from floods and erosion over the next century;
 - Identify the consequences of putting the preferred policies into practice;
 - Set out procedures for monitoring how effective these policies are;
 - Inform others so that future land use, planning and development of the shoreline takes account of the risk and the preferred policies;
 - Discourage inappropriate development in areas where the flood and erosion risks are high; and
 - Meet international and national nature conservation legislation and aim to achieve the biodiversity objectives.
- 1.5.4 In addition, the Welsh Assembly Government identified further interpretation of the aims of SMP2, which are to:
- Encouraging the provision of adequate and cost-effective flood warning systems;
 - Encouraging the provision of adequate, technically, environmentally and economically sound and sustainable flood and coastal defence measures;
 - Discouraging inappropriate development in areas at risk from flooding or coastal erosion; and

- Amend the guidance given in the Flood and Coastal Defence Project Appraisal Guidance Volume 3 - Economic Appraisal to reflect the fact that justification for the public investment should be based on consideration of all option benefits, both quantifiable and unquantifiable, with particular regard to the impacts on people, which can and must be taken into account in the appraisal of options and selection process.
- 1.5.5 Consequently, the SEA is intended to inform the SMP2 process of the social and environmental constraints, issues and effects of the shoreline management policies, and will assess these policies to provide clarity and transparency of the policy selection process.
- 1.5.6 For the SMP2, sections of the coast are considered with respect to their influence on (and interaction with) other areas of the SMP, and therefore a series of 20 Policy Development Zones (PDZs), as illustrated in **Figure 1.3**, have been developed which incorporate specific sections of the coast. These sections of coastline have been considered with respect to their influence on, and interaction with, other areas of the SMP. Furthermore, each PDZ has been divided into Management Units (MANs), of which there are 62 in total, and which themselves are then divided into discrete Policy Units (PUs). A map of the policy units is provided in Chapter 4 of the SMP2.
- 1.5.7 The most appropriate option for shoreline management will depend on the section of shoreline in question and on technical, environmental, social and economic circumstances. The four options considered for shoreline management in the second generation SMPs are presented in **Table 1.1**.
- 1.5.8 Within the development of an SMP, an epoch (time periods) based approach is used for planning purposes, with the three epochs being 0 – 20 (2005 – 2025), 20 – 50 (2025 – 2055) and 50 – 100 (2055 – 2105) years hence.
- 1.5.9 Each of the SMP policies presented in **Table 1.1** has the potential to impact the wider environment in one or more ways. **Table 1.2** presents potential implications of each option.

Figure 1.3 West of Wales Study Area and PDZ



Table 1.1 Options used in SMP Development

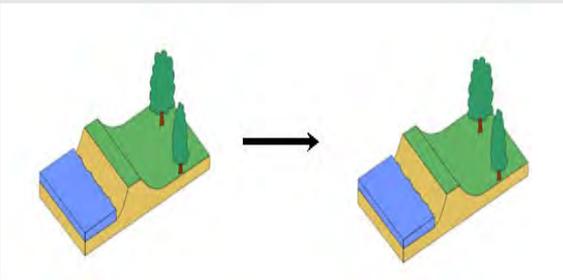
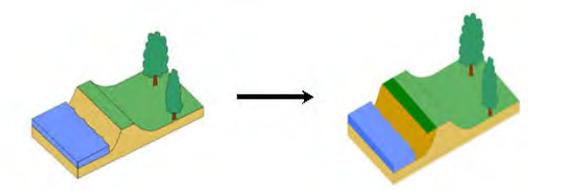
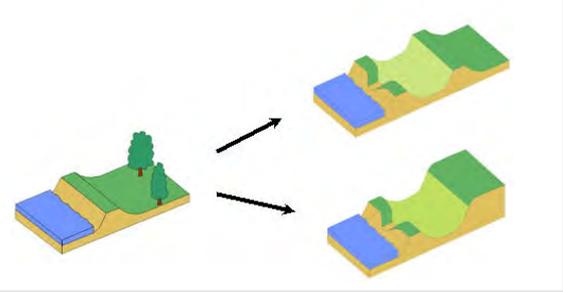
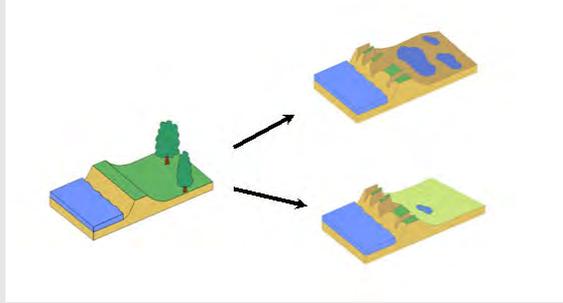
SMP option	Description of option
<p>Hold the line (HTL)</p> 	<p>Hold the existing defence line by maintaining or changing the standard of protection. This policy will cover those situations where work or operations are carried out in front of the existing defences (such as beach recharge, rebuilding the toe of a structure, building offshore breakwaters and so on), to improve or maintain the standard of protection provided by the existing defence line. This could include other policies that involve operations to the back of existing defences (such as building secondary floodwalls) where they form an essential part of maintaining the current coastal defence system.</p>
<p>Advance the line (ATL)</p> 	<p>Advance the existing defence line by building new defences on the seaward side of the original defences. Use of this policy should be limited to those policy units where significant land reclamation is considered.</p>
<p>Managed realignment (MR)</p> 	<p>Managed realignment by allowing the shoreline to move backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences).</p>
<p>No active intervention (NAI)</p> 	<p>No active intervention, where there is no investment in coastal defences or operations.</p>

Table 1.2 Potential Generic Implications of Each SMP Option

SMP Option	Positive Impacts	Negative Impacts
Hold the line (HTL)	<ul style="list-style-type: none"> • Protection of terrestrial habitat landward of defences (such as freshwater marshes, saline lagoons, freshwater lagoons, woodland, and grassland); • Maintaining built landscapes; • Protection of freshwater resources such as abstraction points; • Prevention of pollution from contaminated land; • Protection of economic assets located behind defences (residential, industrial, agricultural, and commercial assets); • Protection of infrastructure and critical infrastructure; • Protection of communities; and • Protection of recreational, cultural and historical assets landward of the defences. 	<ul style="list-style-type: none"> • Interruption of coastal processes; • Coastal squeeze (loss of intertidal habitat); • Prevention of natural coastal erosion exposing geological features within Geological SSSIs, or alteration to the geomorphological processes within spit and sand dune systems, thereby resulting in the sites being in unfavourable condition; • Reduced visual amenity and views of sea in some areas through raising of defences; • Loss or damage of heritage assets on the foreshore with sea level rise; and • Promotion of unsustainable land use practices.
Advance the line (ATL)	<p>As Hold The Line (see above) plus:</p> <ul style="list-style-type: none"> • Protection of terrestrial habitat landward of defences (such as freshwater marshes, saline lagoons, freshwater lagoons, woodland, and grassland); • Maintaining built landscapes; • Prevention of pollution from contaminated land; • Protection of economic assets located behind defences (residential, industrial, agricultural, commercial assets); • Protection of infrastructure and critical infrastructure; • Protection of communities; • Protection of recreational, cultural and historical assets landward of the defences; • Protection of buried heritage assets (including submerged forest) in the foreshore; and • Provision of additional space for communities. 	<p>As Hold The Line (see above) plus:</p> <ul style="list-style-type: none"> • Interruption of coastal processes; • Immediate reduction in extent of intertidal habitat; • Change in function of the existing coastal habitats; • Increased coastal squeeze; • Change in coastal geomorphology, with potential increase in rate of coastal erosion either side of the advanced line; • Potential for a deterioration in the Ecological Status / Potential of the water body involved (i.e. transitional or coastal); • Immediate landscape and visual amenity impacts; • Disturbance to heritage assets in the foreshore; • Disturbance to recreational assets in the foreshore; and • Uncertainty of effects.



SMP Option	Positive Impacts	Negative Impacts
Managed realignment (MR)	<ul style="list-style-type: none"> • Landward migration of coastal habitat under rising sea levels; • Creation of wetland habitat in line with UKBAP and local BAP targets; • Creation of habitat for feeding birds, juvenile fish and other aquatic organisms; • Reduction of flood/erosion risk to some areas; • Promotion of natural coastal processes and contribution towards a more sustainable management of the coast; • Improved visual amenity and natural landscapes along the coast; • Improvement of Ecological Status / Potential of the surrounding water body; and • Maintaining foreshore recreational amenity. 	<ul style="list-style-type: none"> • Increased flooding/erosion of realigned area or managed retreat area; • Change in condition or loss of terrestrial/freshwater habitat landward of defences; • Loss of built landscape features and character; • Impact upon aquifers and abstractions; • Contamination of water bodies if around contaminated land; • Loss of economic assets in hinterland of defences (e.g. residential, industrial, agricultural and commercial assets); • Loss of infrastructure and critical infrastructure; • Loss of communities; and • Loss of recreational and heritage assets
No active intervention (NAI)	<ul style="list-style-type: none"> • Landward migration of intertidal and coastal habitats under rising sea levels; • Creation of wetland habitat in line with UKBAP and local BAP targets; • Creation of habitat for feeding birds, juvenile fish and other aquatic organisms; • Promotion of natural coastal defences; • Contribution towards a more sustainable and natural management of the coast; • Development of a more natural coastal landscape; • Maintenance of favourable condition of Geological SSSIs. • Improvement of Ecological Status / Potential of the surrounding water body; and • Maintaining foreshore recreational amenity. 	<ul style="list-style-type: none"> • Loss of freshwater and terrestrial habitats, and changes to saline lagoons when defences fail; • Change in condition or loss of terrestrial/freshwater habitat landward of defences; • Loss of built landscape features and character; • Deterioration of landscape with declining defences; • Impact upon aquifers and abstractions; • Uncontrolled flooding/erosion leading to pollution from contaminated land; • Loss of economic assets in hinterland of defences (e.g. residential, industrial, agricultural and commercial assets); • Loss of infrastructure and critical infrastructure; • Loss of communities; • Uncontrolled flood/erosion risk to residential and commercial properties and infrastructure; • Loss of heritage assets; • Uncertainty of effects and time for adaptation.

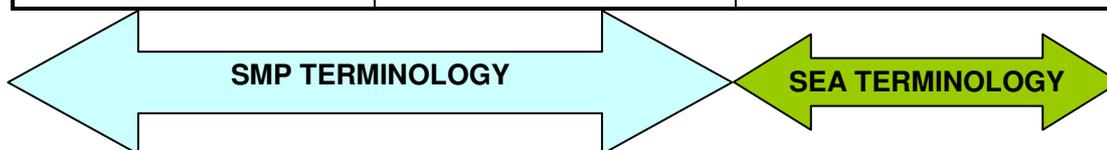
1.6 Implications of SMP Policy on Environmental Receptors

1.6.1 Guidance for Practitioners (Countryside Council for Wales, English Nature, Environment Agency, Royal Society for the Protection of Birds, 2004), CCW SEA Guidance Note Series, (CCW, 2007), and Defra SEA guidance (Defra, 2006a; 2006b) identifies a series of environmental receptors, which should form the initial basis and scope of the SEA. The receptors are the environmental features which may be affected by the SMP policies.

1.6.2 The SMP guidance requires that the SMP is developed in response to a consideration of the environmental features of the coast, features which need to be assessed to determine the nature and characterisation of the coast. There is a difference of language here between the building block of the SEA and the SMP. It is necessary therefore to clarify how SMP features relate to SEA receptors, and to then establish how the SMP may impact on the receptors. A cross reference of the manner in which SEA receptors relate to SMP terminology is provided below in **Table 1.3**.

Table 1.3 SMP and SEA Terminology

SMP Issues & Objectives	SMP Thematic Review	SEA Receptor
Environment	Natural environment	Habitats
		Species
		Air and water
	Agriculture	Soil
	Landscape and character	Landscape
		Material assets
Population		
Heritage	Historic environment	Cultural heritage
Commercial	Current and future land use	Population and communities
Recreation		Population and communities
Hard assets		Population and communities



1.6.3 According to SEA Regulations, each environmental receptor requires an initial appraisal to examine the potential impacts of the SMP. The receptors developed for the West of Wales SMP2 SEA have been aggregated from the receptors specified in the SEA guidance. The intent being to ensure that the development of the SMP and the role of the SEA in policy assessment and development, is provided in regard to a consistent set of criteria which is based upon both SMP and SEA guidance.

- 1.6.4 The specific requirements of the SMP process however, do necessitate a considered approach to the identification of issues and receptors in order to provide a common and consistent language and basis for assessment. For example, due to the nature of the SMP process and its application across the coast; hence, biodiversity, fauna and flora has been separated into two receptors, habitats and species, as the assessment of impacts upon these receptors can be better quantified by this division.
- 1.6.5 Collectively, the impacts on receptors can then be traced back, to establish how the SMP may influence the issues, objectives of the themes within the SMP. This step provides clarity relating to how the environment has been a consideration in SMP production and assessed in the context of the SEA.
- 1.6.6 All the SMP policy options have the potential to have an impact on all SEA receptors, with the exception of air. Air has been scoped out as a receptor potentially effected by the SMP, since no pathway was identified for this effect. SMP policy concerns itself with land, water and the tidal interface as a spatial area, no instances were identified were SMP policy could have any impact, positive or negative on air quality.
- 1.6.7 The identification of receptors which may be impacted by the SMP provides the focus for the subsequent assessment.

1.7 Consultation

- 1.7.1 The West of Wales SMP has followed the procedures for guidance specified in the SMP guidance regarding consultation, which is further described below.
- 1.7.2 The SEA Scoping Report established the environmental baseline (including key environmental issues) and developed a suite of assessment criteria which have been used within this report for the assessment of SMP policy.
- 1.7.3 The Scoping Report was used as a basis for a five week consultation during which the consultees listed below were invited to provide comments on the environmental baseline and the assessment criteria (see **Annex E**).
- Pembrokeshire County Council;
 - Ceredigion County Council;
 - Powys County Council;
 - Gwynedd County Council;
 - Eryri National Park Authority;
 - Pembrokeshire National Parks;
 - Welsh Assembly Government;
 - HENEB;
 - Network Rail;
 - Countryside Council for Wales;
 - RCAHMW;
 - Dyfed Archaeology; and
 - The Environment Agency Wales.

1.7.4 Following drafting of this Environmental Report it was submitted for comment to the Client Steering Group which comprises a number of statutory consultees. The comments received were used to finalise this Environmental Report, and the responses received and the actions undertaken to incorporate them in this final document are presented in **Appendix F**.

1.8 Synergies with Other Parallel Processes

1.8.1 The SEA will form a component of the wider assessment mechanisms for the SMP which also includes:

- The Appropriate Assessment under the Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora);
- Consideration of the requirements of the Water Framework Directive (Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy); and
- As a component of the **Environmental Report**, monitoring measures will be specified post-assessment. The actual specification of monitoring and the actions to enact the monitoring requirements will be included in the SMP Action Plan (discussed below).

1.9 Evaluation of the Plan and Alternatives

1.9.1 As a component of the Environmental Report, monitoring measures will be specified post-assessment. The actual specification of monitoring and the actions to enact the monitoring requirements will be included in the SMP Action Plan (discussed below).

1.9.2 The function of a SMP is to consider the coast as a whole from the perspective of managing coastal flood and erosion risk. The behaviour of the West of Wales shoreline is driven by its geological make-up and it is therefore evident that not one aspect of the coastal (in terms of its physical behaviour, natural or built) environment dominates. There is a complex interdependence between different values along this linear coast, which, put simply means that a decision taken within one SMP management area has the potential to affect multiple adjacent policy units.

1.9.3 As a result, if SMP policy at each management area was to be assessed individually and in-combination, then there would be a multiplier effect along the shoreline such that each management unit would need to be assessed not only for the four options detailed above, but for each option in combination with one of four options for the two adjacent management units. With respect to this, it was therefore considered inappropriate and unmanageable for a simple and rigid procedure of policy appraisal to be applied to each SMP option. Further rationale for this decision was based upon the fact that in many management areas, only a limited number of policy options are actually appropriate, for example, a policy of managed realignment would be wholly inappropriate for a heavily populated conurbation, as would a policy of advance the line on a dynamic and natural shoreline. As such, the assessment of each SMP policy option for each management area was deemed too unwieldy and therefore unnecessary within the context of a SMP, especially when the SEA was applied throughout policy development.

- 1.9.4 The key factor here is that the alternative approaches to management, have been considered within the SMP processes, according to SMP guidance. Whilst this process does not use the same terminology as the SEA process, and the manner in which alternatives would be assessed differs from a simple SEA based assessment, the SMP nevertheless provides a rigorous and robust consideration of the feasible options for management. This process, the options appraisal exercise within the SMP, provides a clear account of how options been evaluated and should be sourced for an understanding of how policy has developed.

2 CONTEXT AND METHODOLOGY

2.1 Alternative Options and Policy Development Zones (PDZs)

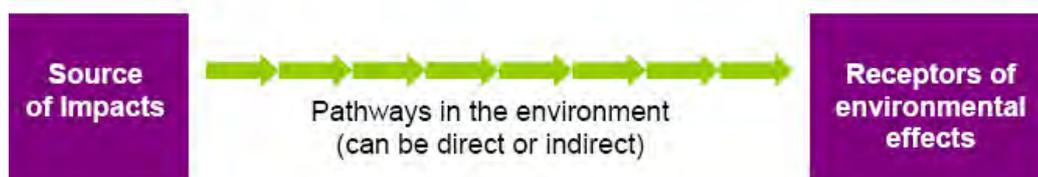
2.1.1 The West of Wales SMP2 will manage the shoreline by looking at four different policy development options including holding of the existing defence line; advancing the existing defence line; managed realignment, or no active intervention (see **Table 1.1**). These policies will be assessed against the environmental assets and criteria (see below) for the study area, on a unit by unit basis for 20 Policy Development Zones (PDZs), (see **Figure 1.3**) in which assessments of assets, settlements, historic monuments and designated sites were undertaken, and which are detailed in **Appendices A to D**.

2.2 Methodology of the West of Wales SMP2

2.2.1 The SEA framework is identified in **Section 1.2, Chapter 1**. This chapter presents the methodology we will use to identify and predict the likely significant environmental effects of implementing the plan.

2.2.2 To assess the environmental effects of implementing the SMP, we will adopt an evidence based, expert judgement system. This approach is based on the widely accepted Source-Pathway-Receptor model (SPR) (**Figure 2.1**).

Figure 2.1 The Source-Pathway-Receptor models as applied to SEA



2.2.3 The appraisal will be a qualitative exercise based on professional judgement supported by peer-reviewed literature where possible and GIS extraction of sites and features. This will be undertaken at a high level in comparison to a detailed site assessment and will also be based on established effects and issues identified in **Section 3** (and the assessment of policies, plans and strategies identified in the SEA Scoping Report) and expert judgement of anticipated effects on the receptors.

2.2.4 The performance of each individual unit associated with the PDZs against the SEA objectives, indicators and targets (see **Section 2.4**) will be given a significance classification in addition to a short descriptive summary (e.g. widespread negative effects with no uncertainty).

2.2.5 Determination of the effect is based on examining the sources of effect that may occur (physical, chemical or biological), the pathway (or route) by which the effect could influence a receptor (e.g. direct footprint disturbance or indirect coastal process change), and the receiving environment or resource (the receptor).

2.2.6 Determination of the significance of each potential effect against the various receptors identified will take into account the following criteria:

- spatial extent;
- magnitude;

- sensitivity of the receiving environment;
- duration, frequency; and
- reversibility.

2.2.7 Using this information, in broad terms, impacts have been classified as either beneficial or adverse, with the descriptor of ‘minor’, ‘major’ or ‘neutral’ used to denote whether the impact is significant or not significant based on particular criteria. The criteria are presented in **Table 2.1** and the receptors are specified in the SEA Practical Guidance (ODPM, 2005) and are listed in **Table 1.3**.

Table 2.1 Significant Criteria used in the Assessment of Impacts

Significance	Description
Major Positive	The policy is likely to lead to a positive impact on nationally (or internationally) important parameters, or a significant achievement of the sustainability objective. The positive impacts may be short-term large-scale or long-term and national in scale. In addition, significant cumulative and indirect positive impacts are likely within and outside the West of Wales SMP2 area.
Moderate Positive	The policy is likely to lead to a positive impact on regionally important parameters, or a moderate achievement of the sustainability objective, or a significant positive impact of local scale. The positive impacts may be short-term large-scale or long-term and regional in scale. Positive cumulative impacts would arise between local areas or a number of parameters.
Minor Positive	The policy is likely to lead to a positive impact to locally important parameters, or a minor achievement of the sustainability objective. Impacts would be short and long-term, or could be moderate positive impacts in the short-term. There may be limited if any cumulative or indirect impacts within the West of Wales SMP2 area.
Neutral	The policy would have no positive or negative impacts or change to the objective in either the short or long-term. A neutral score arises when there is a fair degree of certainty that no positive or negative impact is predicted, or where an impact would be dependent on the location of the measures of such a policy.
Minor Negative	The policy is likely to lead to a negative impact to locally important parameters, or a minor reduction to the sustainability objective. Impacts would be short and long-term, or could be moderate negative impacts in the short-term. There may be limited if any cumulative or indirect impacts within the West of Wales SMP2 area.
Moderate Negative	The policy is likely to lead to a negative impact on regionally important parameters, or a moderate reduction of the sustainability objective. Impacts would be short and long-term, or could be significant negative impacts in the short-term. The policy may have limited cumulative and indirect impacts within a project area.
Major Negative	The policy is likely to have a negative impact on nationally (or internationally) important parameters or a series of long-term small scale (cumulative) impacts. The policy is likely to significantly disrupt the achievement of the sustainability objective. Indirect impacts may also extend outside the West of Wales SMP2 area.
?	Unknown or insufficient data.

2.3 Mitigation and Monitoring

- 2.3.1 Any mitigation measures or monitoring which are required as a result of this assessment will be clearly specified and listed in this report and ultimately detailed in the SMP Action Plan. This approach provides the most robust mechanism for delivery, since the Action Plan is, a) directly linked to SMP delivery, and b) builds on the organisational roles developed within the SMP process.

Note: It is important to note that the approach to SEA for the West of Wales SMP2 is at a higher level than would be taken for an Environmental Impact Assessment (EIA) for a specific project.

Consequently, impacts are targeted at 'regional' scale issues and, as such, the indicators that provide regional scale focus have been considered more important than those that provide information on a local or county scale level. This is in accordance with the SEA Directive.

2.4 SEA Objectives

- 2.4.1 The aim of sustainable development is to balance economic progress with social and environmental needs, and not to take resources that future generations may need to survive and develop. Sustainable shoreline management policies will be those which take account of the relationships with other defences, developments and processes, and which avoid, as far as possible, committing future generations to inflexible and expensive options for defence. Putting the policies into practice should benefit stakeholders and help to improve the environment, both nationally and locally. Environmental quality in relation to the coast includes, geology and geomorphology, landscape, heritage, flora and fauna and their associated habitats, water quality and resources (for both humans and the natural environment), and the many other environmental "assets" and "resources".
- 2.4.2 Sustainability objectives are the essential tool for comparison and decision making within the creation and selection of the SMP2 policies. The objectives for the West of Wales SMP2 are presented in **Table 2.2** and are based on the objectives of the adjoining North West England and North Wales SMP2 which runs east from the Great Orme (Halcrow, 2010) in order to ensure consistency across the SMP units as well as consistency in the assessment of the potential effects of the SMP policies. The indicators that were presented with the sustainability objectives (Halcrow, 2010) have been added to where relevant to this SMP study area. The indicators ensure that wherever possible an objective and quantifiable assessment of the policies can be undertaken, providing greater transparency. These indicators can also provide some of the key indicators that would be used for monitoring of the SMP2 policies into the future. It should be noted for this strategic level of assessment, RSPB sites, Local Nature Reserves (LNRs) and Wildlife Trust Reserves will not be included in this SEA for the West of Wales SMP2.

Table 2.2 West of Wales SMP2 Sustainability Objectives and Indicators

SEA Objective	Features covered by the objective	Indicator	Target
Biodiversity, Flora and Fauna			
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	<ul style="list-style-type: none"> • Special Protection Areas (SPAs) • Special Area of Conservation (SACs) • Ramsar Sites and Marine Protected Areas • Biogenetic and Biosphere Reserves 	Reported conservation status of international conservation sites relating to flood risk management and erosion.	No deterioration in the conservation status of designated sites as a result of changes in erosion / flood risk management measures.
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	<ul style="list-style-type: none"> • Site of Special Scientific Interest (SSSIs) • National Nature Reserves (NNRs) 	Reported conservation status of national conservation sites relating to flood risk management and erosion.	No deterioration in the conservation status of designated sites as a result of changes in flood / erosion risk management measures.
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	<ul style="list-style-type: none"> • National and local BAP habitats 	BAP habitat present.	No loss of extent of BAP habitat.
Geology and Geomorphology			
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	<ul style="list-style-type: none"> • Geological Sites of Special Scientific Interest (SSSIs) relating to flood risk management and erosion • GCR (Geological Conservation Review Sites) • RIGS (Regionally Important Geological Sites) 	Reported conservation status of geological SSSI, GCR and RIGS relating to erosion and inundation.	No deterioration in the conservation status of the designated site as a result of changes in erosion / flood risk management measures.
To maintain and enhance the geomorphological characteristics of natural features.	<ul style="list-style-type: none"> • Beaches • Dune systems 	Number of natural features currently providing a natural flood defence function.	No loss of natural features currently providing a natural flood defence function.
Water			
To prevent pollution of soil and ensure no deterioration in water quality.	<ul style="list-style-type: none"> • Landfill sites (EA source), major industry and hazardous waste sites, disused mines, potentially contaminated land, designated bathing water, surface and ground water (e.g. Groundwater Source Protection Zones) • Commercial fishing grounds and shell fisheries (e.g. Shellfish Harvesting Areas) 	Number of potentially polluting sites at risk from tidal flooding and/or coastal erosion.	No increase in risk to potentially polluting sites at risk from tidal flooding and / or coastal erosion compared with 'do nothing' policy.

SEA Objective	Features covered by the objective	Indicator	Target
Landscape Character and Visual Amenity			
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	Changes in landscape character and views within: <ul style="list-style-type: none"> • Areas of Outstanding Natural Beauty • (AONB) • National Parks • Heritage Coasts 	Compliance with AONB and National Park objectives relevant to tidal flood risk/erosion management. Change in landscape character within designated areas.	No adverse impacts on landscape character within designated sites as a result of a change in erosion / flood risk management measures.
Historic Environment (Cultural Heritage)			
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	<ul style="list-style-type: none"> • World Heritage Sites • Scheduled Monuments (SM) (England and Wales) • Registered Parks and Gardens • Listed Buildings • Conservation Areas 	Areas of architectural and archaeological importance at risk from coastal erosion and/or tidal flooding.	No increase in tidal flood/erosion risk for archaeological features sensitive to erosion / flooding, compared with the 'do nothing' policy.
Material Assets			
To minimise the impact of policies on marine operations and activities.	<ul style="list-style-type: none"> • Ports and harbours, Boatyards Moorings, Yacht and Sailing Clubs Ferry routes and waterways Coastguard, lifeboat and lifeguard. • Access to the sea and navigation 	Number of marine operations and activities affected by coastal erosion and/or tidal flooding.	No increase in number of marine operations and activities affected by coastal erosion and/or tidal flooding compared with the 'do nothing' policy.
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	<ul style="list-style-type: none"> • Motorways, A, B and minor roads (where linkage is a key issue) Railway lines and stations • Airfields and aerodromes • International airports • Pumping stations, sewage works, quarries, existing power generating facilities (e.g. nuclear power stations), and substations • Access for emergency services 	Number of critical infrastructural assets at risk coastal erosion and/or tidal flooding.	No increase in number of critical infrastructural assets at risk from coastal erosion and/or tidal flooding compared with the 'do nothing' policy.
Land Use			
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	Grades 1 – 3A Farmland	Grades of agricultural land at risk from coastal erosion and/or tidal flooding.	No risk of coastal erosion and/or tidal flooding. to Grades 1 – 3a agricultural land.

SEA Objective	Features covered by the objective	Indicator	Target
Population			
To manage and adapt to coastal erosion and inundation to people and residential property.	<ul style="list-style-type: none"> Isolated properties Housing in coastal villages, towns and cities Community 	Number of residential properties at risk from coastal erosion and/or tidal flooding.	No increase in number of residential properties at risk of coastal erosion and/or tidal flooding compared with the 'do nothing' policy.
To manage and adapt to coastal erosion and inundation or damage to key community, recreational and amenity facilities.	<ul style="list-style-type: none"> Key vulnerable community facilities (e.g. surgeries, hospitals, aged persons homes, schools, shops, churches, libraries, universities etc) Key amenity facilities (e.g. public open space etc) Key recreational facilities (e.g. golf courses, bathing beaches, formal promenades, national cycle routes, Country Parks, Public Rights of Way, Castles and Forts etc) Access to community / amenity facilities 	Number of high value community, amenity and recreational facilities at risk of coastal erosion and/or tidal flooding.	No increase in number of high value community, amenity and recreational facilities at risk coastal erosion and/or tidal flooding compared with the 'do nothing' policy.
To manage and adapt to coastal erosion and inundation to minimise risk to industrial, commercial, economic and tourism assets and activities.	Shops, offices, businesses, factories, warehouses, areas identified for regeneration, caravan parks, airports, stone and mineral extraction sites, military establishments and others key areas of employment	Number of industrial, commercial, economic and tourism assets at risk from coastal erosion and/or tidal flooding.	No increase in number of industrial, commercial, economic and tourism assets at risk from coastal erosion and/or tidal flooding compared with the 'do nothing' policy.
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.	<ul style="list-style-type: none"> MoD sites (including UK disposal sites) Core sites and Firing Ranges) 	Number of MoD sites at risk from coastal erosion and/or tidal flooding.	No increase in number of MoD sites at risk from coastal erosion and/or tidal flooding compared with the 'do nothing' policy.

3 STUDY AREA

3.1 Definition of Study Area

3.1.1 A detailed environmental and social baseline is provided in **Annex E**, as part of the Scoping Report to which the reader should refer for more detailed information on the study area. A summary of the baseline and the key environmental issues identified for the West of Wales shoreline is provided in this chapter and offers a reference point within this report to the factors which have shaped the form and content of the assessment.

3.2 Baseline Environment Summary

3.2.1 The environmental baseline in **Annex E** covers the coast and mainland from St Anne's Head and Ynys Enlli to the Great Orme's Head and includes the Isle of Anglesey. Including estuaries, the total length of the coast within the West of Wales SMP2 study area is approximately 460km. A general description of the physical environment is provided below.

3.2.2 The coastline is diverse in character from urban seaside resorts, working harbours and ferry ports, to small rural communities and isolated stretches of coast. The coastline hosts spectacular unspoilt rugged scenery with tall sea cliffs, prominent headlands, small bays with sandy or shingle beaches, caves, rock stacks and areas of prominent sand dunes. Much of the coastline is designated as Heritage Coast and is of significant cultural, historic and geological value. There are several islands off the West of Wales coastline, the largest being Anglesey in the northwest. The West of Wales SMP2 study area includes coastline and valleys within the Counties of Anglesey, Ceredigion, Conwy, Gwynedd, Pembrokeshire and Powys.

3.2.3 The Cardigan Bay coast is formed from well-bedded Ordovician and Silurian shales and sandstones. Larger wind waves and oceanic swell move from the southwest to the northeast in the Irish Sea through St Georges Channel. Exposure to waves varies throughout the West of Wales SMP2 study area, with Pembrokeshire sheltering some southern parts of Cardigan Bay and this protection is enhanced in local areas by the numerous rocky headlands such as Strumble Head and Cemaes Head. Along the south side of the Llyn Peninsula the coast becomes more exposed to the large waves from the south west.

3.2.4 The most notable commercial ports along the coast are Holyhead and Fishguard. The largest urban area in the study area is the city of Bangor, located in North Wales, with a population of over twenty-one thousand.

3.2.5 The recreational use and amenity value of the West of Wales coastline are two of its main features. The Welsh coast is a vital resource to the tourism industry in Wales (especially in the north and south west), and accounts for a quarter of total tourism spending in Wales (WAG, 2007).

3.2.5 **Figures 3.1 to 3.6** provide an overall summary of the key environmental assets associated with each of the PDZs of the West of Wales SMP2.

3.3 Key Environment Issues

3.3.1 As defined previously in **Section 3.2** and **Annex E**, from a consideration of the policy, legislation and designations relevant to the West of Wales shoreline and supported by discussions with key stakeholders as part of the SMP process, a series of environmental issues have been identified. These issues are an expression of the problems which the SMP needs to address in the delivery of providing policy for shoreline management. The issues suite has been developed to avoid a reliance on generic coastal management issues (although some issues are the same around the coast and are therefore included) and has provided an account of what other plans, management obligations and stakeholders consider to be the most critical environmental issues for the West of Wales shoreline related to the water environment; coastal environment and geology; biodiversity; historic environment; community and assets.

The Water Environment

3.3.2 Key current and future risks of the water environment include:

- Increased frequency and magnitude of storm water overflow events leading to pollution of coastal waters either through a lack of maintenance or increased rainfall as a result of climate change;
- Increased 'backflow' of storm water/sewage infrastructure through a lack of maintenance or increased rainfall as a result of climate change;
- Rising sea levels leading to unpredictable coastal dynamics, which may increase coastal erosion and damage coastal amenities;
- Rising sea levels may also lead to significant changes in fluvial dynamics and processes;
- Potential risks of sea level rise/surge into water supply/abstractions;
- Potential for loss of small towns and villages due to sea level rise, tidal and fluvial flooding for example, Fairbourne, Beaumaris, Barmouth, Holyhead, Conwy (Gwynedd), Fishguard, and Goodwick (Dyfed);
- Impacts to freshwater habitats in response to defences and/or coastal squeeze (e.g. impacts to coastal saltmarsh);
- Increase in flash flooding due to heavy rain and an increase in river and coastal flooding and erosion;
- Reduced bathing and water quality due to potential increased diffuse pollution and litter of beaches; and
- Changes in fisheries, tourism and recreation sustainability.

The Coastal Environment and Geology

3.3.3 Key current and future risks of the coastal environment include:

- Coastal defences, which can have a major impact on natural coastal processes, border some 29% of the Welsh coastline. They are having a major impact on the coastal landscape of Wales;

Figure 3.1 West of Wales PDZs 1 to 7 Showing Designated Sites

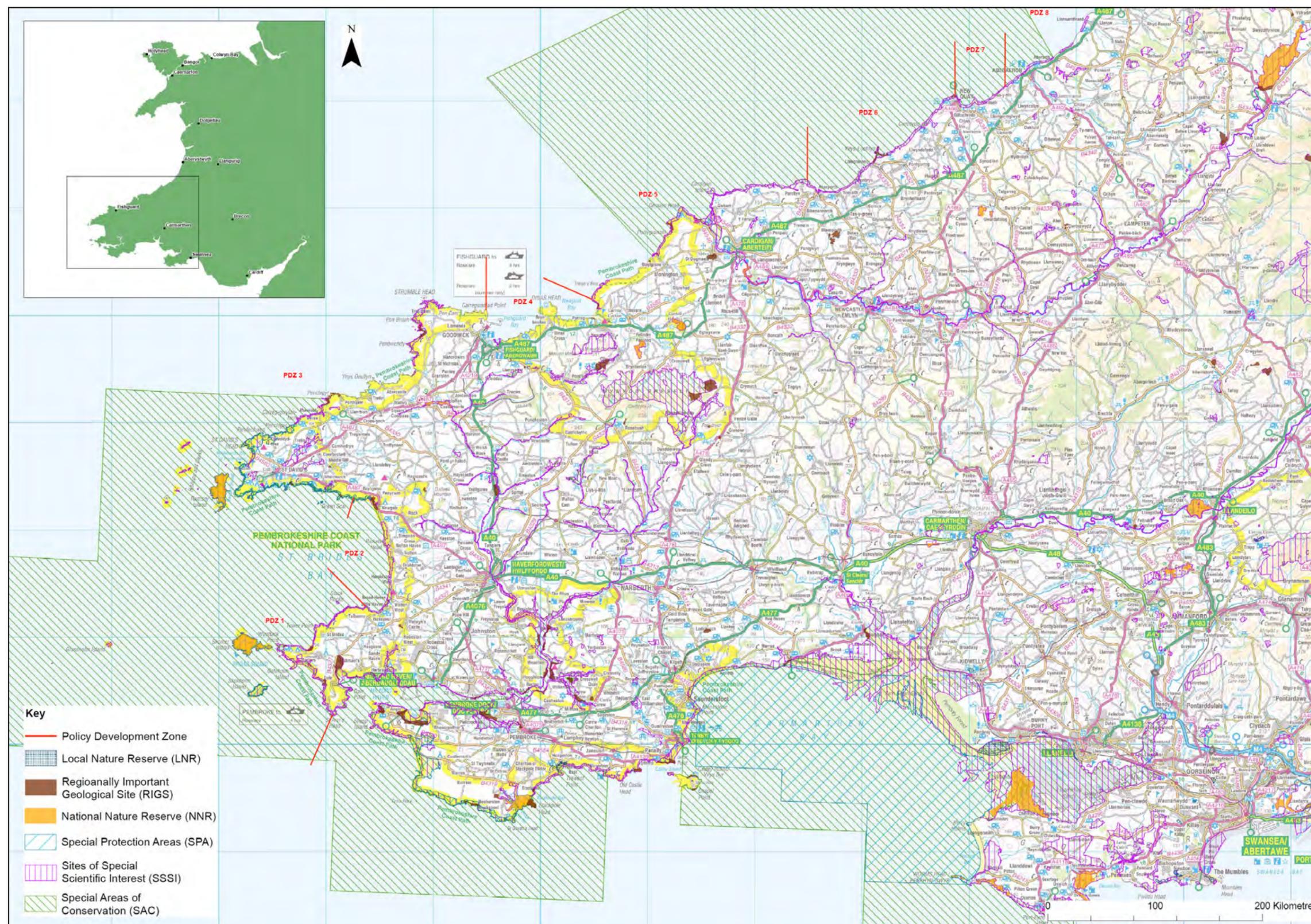


Figure 3.2 West of Wales PDZs 7 to 14 Showing Designated Sites

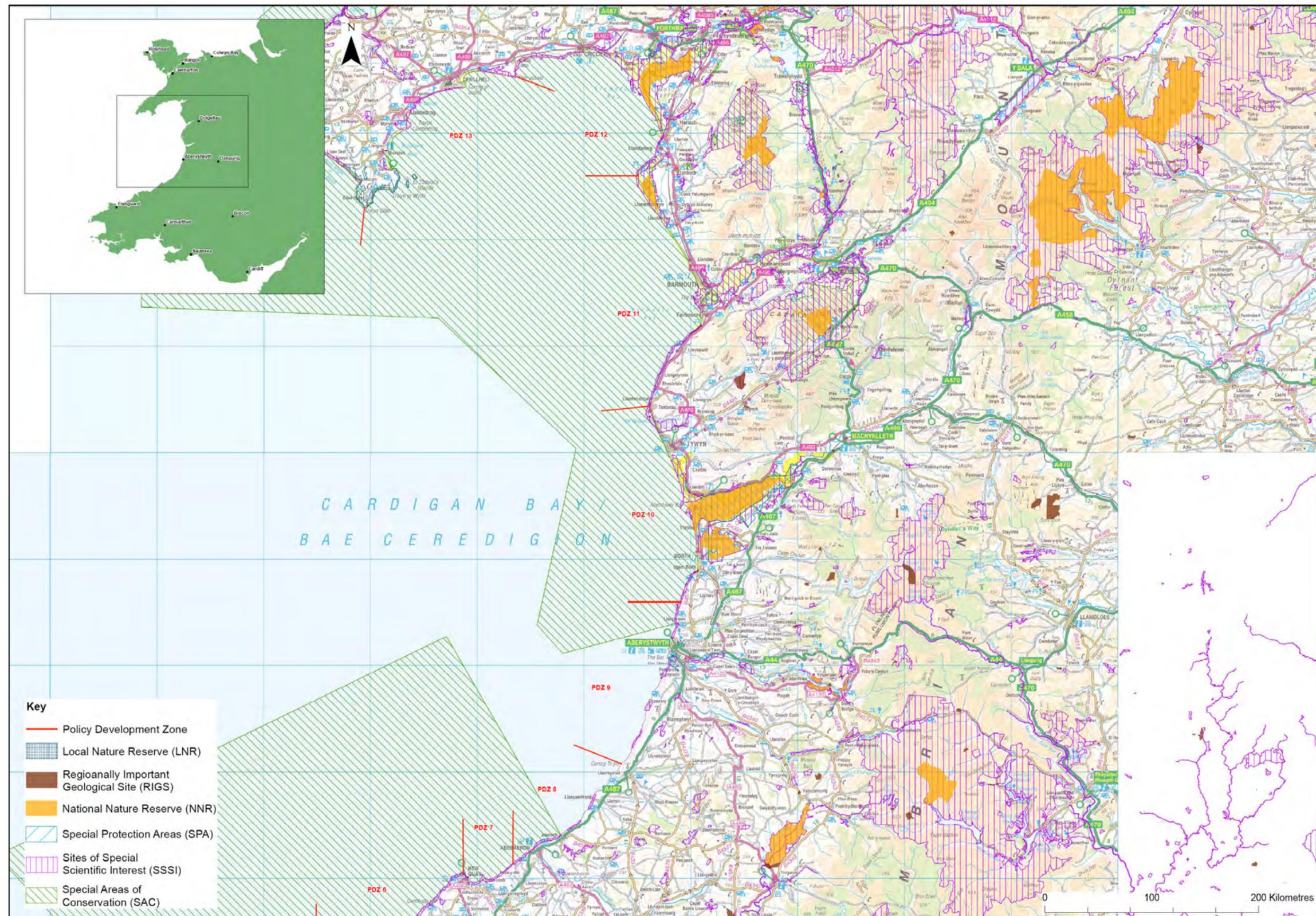


Figure 3.3 West of Wales PDZs 14 to 20 Showing Designated Sites

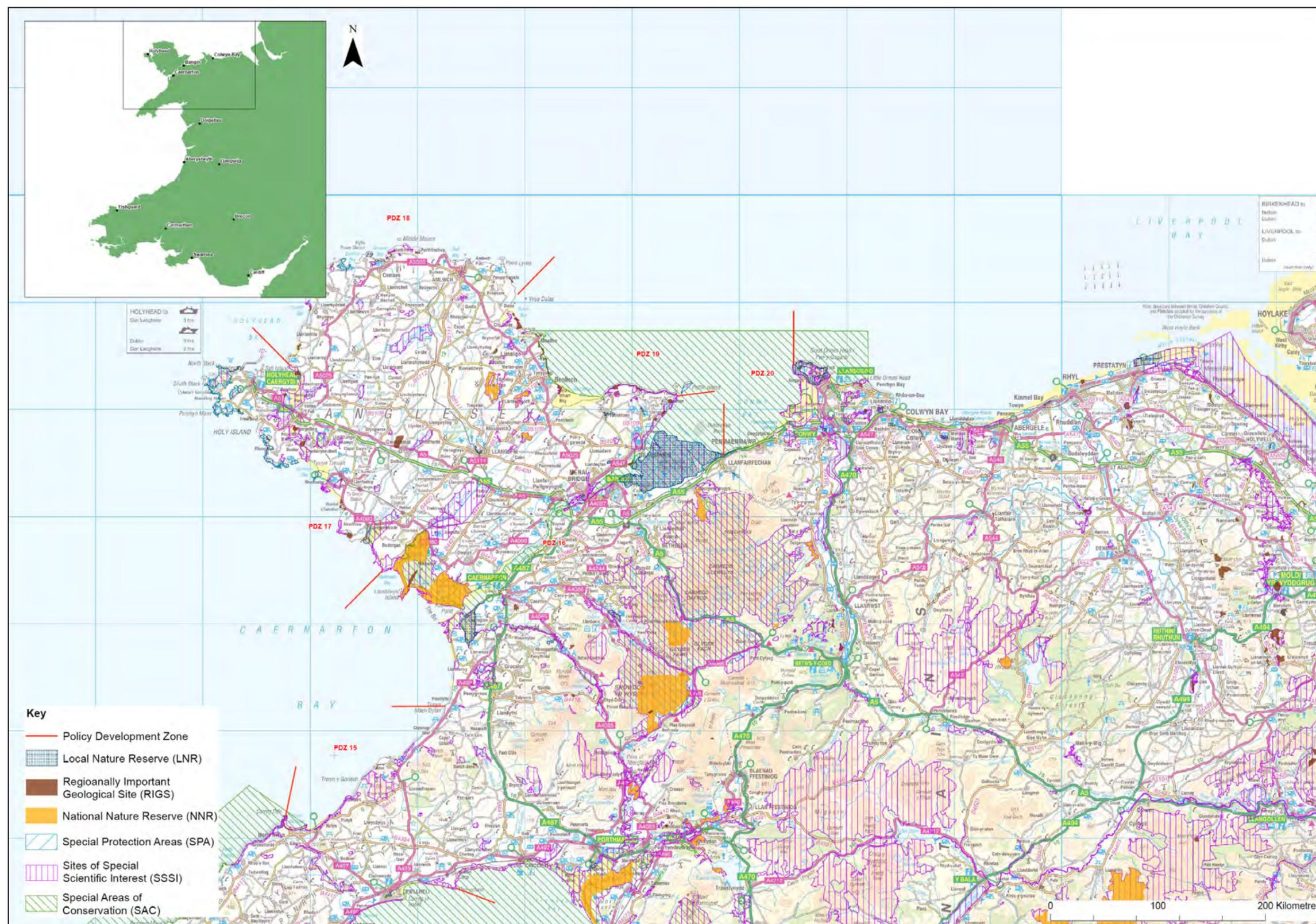


Figure 3.5 West of Wales PDZs 7 to 14 Showing Historic Sites and Infrastructure

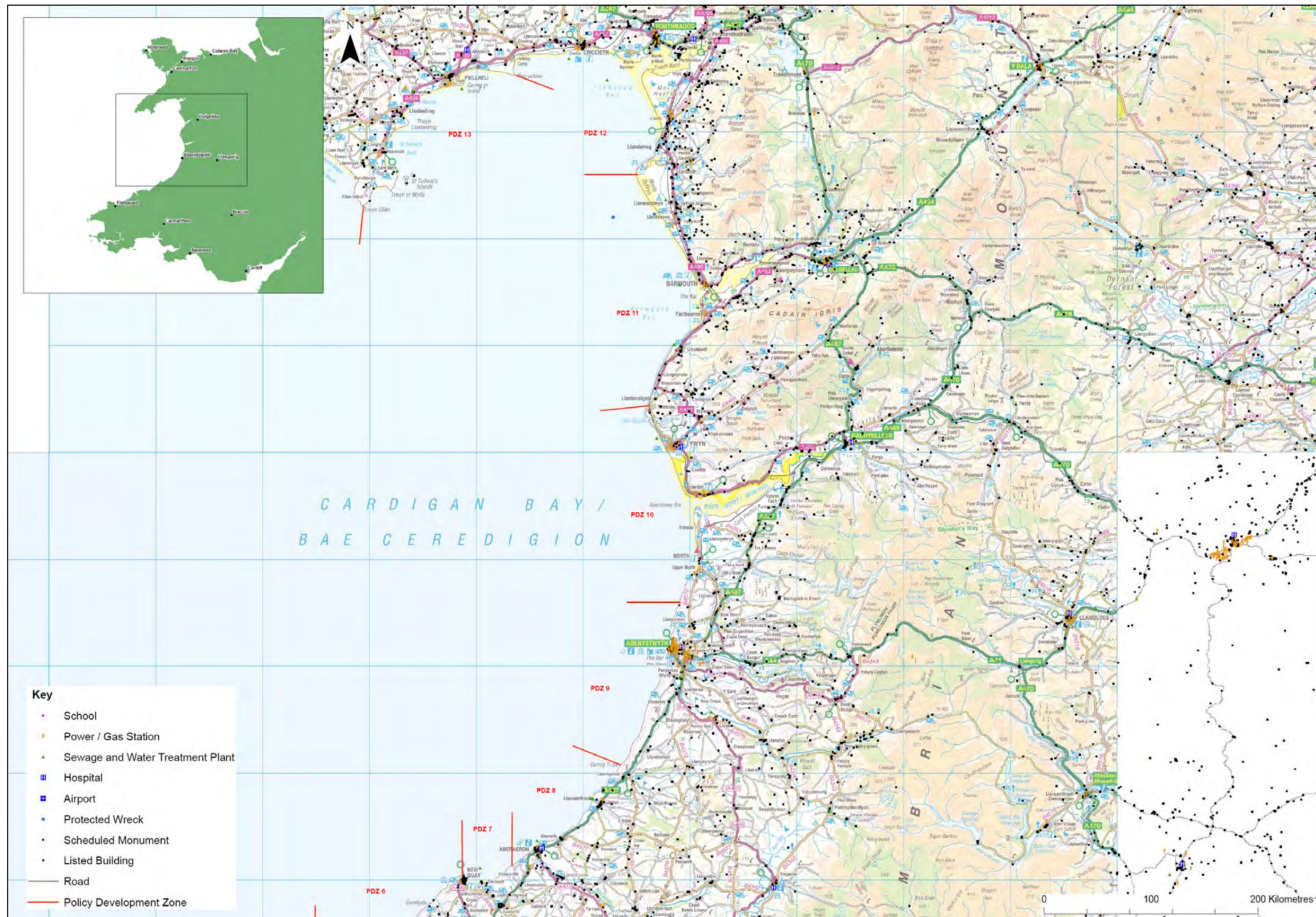


Figure 3.6 West of Wales PDZs 15 to 20 Showing Historic Sites and Infrastructure



- The loss of or damage to geological and geomorphological interest features on the coast due to development and/or coastal/flood defence works, such as at Solva SSSI, Abermawr SSSI, Creigiau Pen Y Graig SSSI, Newport Sands SSSI, and parts of the Pembrokeshire Coast;
- Mwnt beach (near Cardigan) is slowly retreating;
- Sea level rises and implications on recreation and tourism;
- Deterioration of coastal and flood defences;
- Increased risk of tidal and fluvial flooding within settlements such as Cardigan, Aberaeron, Aberystwyth, Borth, Aberdovey, Tywyn, Fairbourne, Barmouth, Llandanwg, Porthmadog, Pwllheli, Caernarfon, Rhosneigr, Holyhead, and Conwy;
- Interruption of sediment supplies by defence works leading to exacerbated erosion problems elsewhere;
- Increased frequency and magnitude of major winter rainfall events leading to flash flooding and instability of cliffs, with such settlement areas at risk including; and
- Lack of sediment supply around the coast leading to exacerbated erosion problems, with such areas at risk including the Borth sand dunes, while impacts of sea level rise could change existing physical and chemical conditions of habitats such as salinity levels of coastal lagoons.

Biodiversity

3.3.4 Key current and future risks of biodiversity include:

- Changes to current distributions of habitat and species due to climate change;
- Loss of coastal habitats (e.g. saltmarsh and mudflats) due to coastal squeeze between rising sea levels and hard sea/flood defences, for example loss of saltmarsh/mud flats of Mawddach Estuary;
- Potential risks to sea level rise/surge in estuarine and riparian habitats;
- Fragmentation of habitats;
- Colonisation of habitats by 'new' species due to climate change;
- Sea levels rises and direct loss of species biodiversity and habitat, such as increased flooding / inundation risk to Ynys Feurig, Cemlyn Bay, and The Skerries SPA including the Cemlyn lagoon. However, sea level rise may also have a positive benefit to such sites;
- Increased recreational use of waterways and associated impacts to habitats and species, such as impacts to the Cardigan Bay SAC, and Carmarthen Bay and Estuaries SAC;
- Deterioration of habitats and associated species due to coastal and flood defence works and cliff stabilisation works, such as the surrounding maritime cliffs and slopes of Gwynedd (e.g. Llyn Peninsula);

- Existing developments built in inappropriate coastal locations reliant on ongoing defence works;
- Existing coastal defences that are no longer economically justifiable but which have residual effects;
- Interruption to sediment supplies and movement along the shore affecting habitats and associated species;
- Freshwater and brackish habitats reliant on protection from existing sea defences;
- Increase in tourism and water based activities will impact on coastal and cliff erosion and may impact birds, cetaceans etc; and
- Fragmentation of habitats is a key issue; in recent years there has been a general trend of wildlife habitats becoming smaller and more isolated. The effects of climate change have the potential to impact further on flora and fauna, it is therefore important to ensure linkages and corridors are developed that will help wildlife to respond to climate change.

The Historic Environment

3.3.5 Key current and future risks of the historic environment include:

- Loss of archaeological sites such as SMs and historic sites through flooding and coastal erosion;
- Increased recreational pressure on historic sites;
- Inappropriate coastal development affecting historic sites and historic landscapes;
- Increased loss of historic sites through changes in climate change such as those occurring in the intertidal and sub tidal zone. Key sites that maybe under threat to changes in climate change and associated weather conditions include for example, Conwy castle; Criccieth castle; Cymru - Mwnt - ar chapel; ruins of St Dwynwen's church and the lighthouse; St Dogmael's Abbey; and St Non`s Chapel; and
- There are numerous unscheduled and undesignated archaeological sites across the SMP2 study area, and there are likely to be many more currently unknown sites that in the future could be revealed by development or ongoing coastal erosion, or affected by coastal management policies.

3.3.6 **Table 3.1** lists a series of historic environment sites around the West of Wales coastline (based on the detailed assessment in **Appendices A to D**) that are likely to be at risk of erosion as a result of NAI or MR policies, including the epoch in which the risk could arise. The risk occurrence is indicated by a shaded **red** box in the relevant epoch.

Table 3.1 Key Historical Sites that are at Risk of Erosion Throughout the 3 Epochs under NAI or MR Scenarios

PDZ Unit	Location	Type	Feature	Epoch		
				1	2	3
1.1	Little Castle Point	SM	Hillfort			
1.1	Great Castle Head	SM	Hillfort			
1.1	Gateholm Island	SM	Monastery/enclosed settlement			
1.1	Watery Bay	SM				
1.1	Jack Sound	SM	Deer Park promontory Fort			
1.1	Tower Point	SM	Tower Point Rath			
1.1	Castle Head	SM	Castle Head defended enclosure			
1.1	Mill Haven	SM	Small sculpture, Lime Kiln LB and Mill Haven Rath			
1.2	St Brides	Listed Building	Small village with many archaeological and historic features, including a church, burial grounds, chapel and tower			
2.7	Broad Haven	SM	Hillfort, Black Point Rath			
3.1	Dinas Fach	SM	Dinas Fach Defended enclosure			
3.1	Segar Rock	SM	Porth y Rhaw camp			
3.1	Pempleidian	SM	Caerfai Camp			
3.1	Castell Heinif	SM	Castell Heinif promontory fort			
3.1	Porthmelgan	SM	Hut circles and Ancient Enclosures NW of Carn Illidi			
3.1	St David's Head	SM	St David's Head Camp			
3.1	Castell Coch	SM	Castell Coch Promontory fort			
3.1	Caerau	SM	Caerau Promontory Forts			
3.1	Abermawr	SM	Aberfelin Mill			
3.1	Pen Castell Coch	SM	Promontory Fort			
3.1	Porth Mawr	SM	Castell Coch Promontory Fort (on Penmorfa)			
3.1	Carreg Golchfa	SM	Defended Enclosure			
3.1	Pwll Deri	SM	Monument			
3.1	Dinas Mawr	SM	Dinas Mawr Camp			
3.11	Ynys y Castell	SM	Ynys y Castell hillfort			
3.12	Abermawr	Heritage Coast	Submerged forest			
3.12	Abermawr	Listed Building	Submarine Listening Station			



PDZ Unit	Location	Type	Feature	Epoch		
				1	2	3
3.8	Whitesands Bay	Heritage Coast	Submerged forest			
4.15	Newport, Parrog	Listed Building	Ty Mawr and Limekiln adjacent to Kilnhouse			
4.3	Goodwick	Listed Building	Bridge Cottages			
4.8	Lower town Fishguard	Listed Building	Old Fort			
4.8	Castle Point	SM	Old Fort			
5.1	Castell Tre-Riffith	SM	Promontory Fort			
5.1	Pen-Castell Promontory Fort	SM	Promontory Fort			
5.15	Mwnt	SM	Religious features, mortuary, chapel			
5.8	Gwbert	Listed Building	Remains of pre Norman house			
5.9	Craig y Gwbert	SM	Defended enclosure			
6.3	Penbryn	SM	Castell Bach			
6.6	Llangrannog	Boating / Shipyards	Shipyards			
6.7	Cwmydy	SM	Castall Bach			
6.8	Cwmydy	Listed Building	Former Lime Kiln			
10.6	Dyfi Valley	Listed Building	Dwellings			
10.6	Dyfi Valley	Listed Building	Military			
10.6	Dyfi Valley	SM	Domen Las			
11.4	Fairbourne	SM	Anti Invasion defences			
12.19	Criccieth	SM	Criccieth Castle			
13.7	Tan y Bwlch	Listed Building	Building			
13.18	Porth Ceiriad	SM	Pared Mawr Camp			
14.5	Hells Mouth	Listed Building	Listed Buildings and Historic park to the west of Porth Neigwl			
15.1	Porth Ysgaden	Listed Building	Lime Kiln			
15.2	Porth Dinllaen	Listed Building	'White Hall'			
16.1	Cwningar Bodowen	SM	Tywyn y Parc promontory fort			
16.3	Dinas Dinlle	SM	Scheduled Ancient Monument			
16.6	Menai Straits	Listed Building	Yr Unicorn			
16.13	Port Dinorwig	SM	Promontory Fort 'Dinas Camp'			



PDZ Unit	Location	Type	Feature	Epoch		
				1	2	3
16.15	Vaynol Park	Listed Building	Well preserved late 16th century walled and terraced garden including some listed structures			
16.16	Llanfair Pwllgwyngyll	Listed Building	Statue, and coastal properties			
16.26	Bangor	Listed Building	Low lying buildings And 'Pier Camp'			
17.3	Aberffraw	Listed Building / SM	There are a few listed buildings, and a bridge that is a SM in this town			
17.5	Porth Nobla	Listed Building	Tyn Towyn cottage			
17.19	Afon Alaw	SM	Ynys Leurad Hut circles			
17.19	Rhyd y Gari sand	SM	Feilin Carnau Tide Mill, Felin Wen tide mill and bodior tide mill			
17.21	Valley C	SM	Newlands Fish Weir			
18.1	Porth y Felin	Historic Parks and Gardens	Cestyll historic park and Listed Buildings			
18.3	Tre Fadog	SM	Castell			
18.14	Porth Wen	SM	Porth Wen brickworks			
19.3	Lligwy Sands	SM	Traeth Lligwy Fish Weir			
19.7	Traeth Bychan	Listed Building	Lime Kilns			
19.14	Red Wharf Bay	Listed Building	Bridge			
19.15	Red Wharf Bay	SM	Llanddona Fish Weir			
20.12	Gogarth	SM	Gogarth Grange			
20.19	Canovim Roman Fort	SM / Listed Building	SM, Historic Park and Garden and Listed Building			

Community and Assets

3.3.7 Key current and future risks associated with community and assets:

- Increased closures of coastal sections of railway;
- Sustainability of existing infrastructure, rising sea-levels and managed retreat;
- Cliff erosion (retreat) and risk to community assets (e.g. Cardigan Bay);
- Flood risk, for example in urban areas and settlements such as Cardigan, Aberaeron, Aberystwyth, Borth, Aberdovey, Tywyn, Fairbourne, Barmouth, Llandanwg, Porthmadog, Pwllheli, Caernarfon, Rhosneigr, Holyhead, and Conwy;
- Reduction in public open spaces due to coastal cliff retreat in response to erosion (e.g. Cardigan Bay);
- Reduction in tourism due to beach loss through erosion or lack of sediment supply;
- Reduction in tourism due to deteriorations in bathing water quality; and
- Increased development pressure along the coastal shoreline and associated transport infrastructure.

4 STRATEGIC ENVIRONMENTAL ASSESSMENT

4.1 Assessment Methodology

Comparison of SEA Objectives against and within SEA Objectives

4.1.1 **Table 4.1** presents the comparison of SEA objectives against the other SEA objectives and also themselves, to determine the level of conflict likely to arise as a result of the SMP policy decision making. Where there is no conflict or the objective supports the achievement of another objective, the row is highlighted green, whereas conflict is highlighted in amber. Where there is no conflict, but no expected integration between the objectives, the row has been highlighted in blue indicating neutral or no effect on achievement of the objective.

4.1.2 The objectives used for this SEA are based on objectives used in other SEAs, and clearly they can result in a large degree of conflict between interests in relation to SMP policies. **Table 4.1** shows where the specific achievement of one objective can at the PDZ level result in another objective not being achieved or even adversely affecting the interests 'supported' by that objective. This conflict occurs down at the site-specific level as well.

4.1.3 Obvious conflicts occur between natural environment objectives and human related objectives, for example, allowing natural processes to occur (and the resulting development and extension of new or different habitats) can result in the loss of human assets (built heritage, archaeology, infrastructure, settlements). Though in some ways, the values provided to human aspects also results in achievement of human related objectives (e.g. landscape to some degree, and amenity/recreation).

4.1.4 Conflicts can occur as a result of the objective on its own features. For example nature conservation objectives, which can clearly conflict with human related assets and features, can also conflict between habitats. For example, marine and coastal habitats can come into conflict with the freshwater and terrestrial habitats. The protection of human assets can also affect human values (such as amenity and recreation).

4.1.5 **Table 4.2** presents the strategic assessment of the SEA objectives against the 4 SMP policies across the whole SMP. Consequently, it is evident that the comparison of the objectives solely against the 4 SMP policies would be the same across each PDZ, resulting in the same evident conflicts occurring, as well as conflicts within objectives. These show that clear conflicts only occur across a number of areas for NAI, HTL and ATL policies. The HTL and ATL policies would conflict with the geological objective, whilst NAI policies would conflict with historic environment, marine activities, infrastructure and agricultural land objectives. Many of the remaining objectives could conflict or help in the achievement of an objective solely depending on the site specific interests.

Detailed Assessment of Each Policy Unit of the Preferred Policies

4.1.6 The assessment is provided at two levels:

- 1) Primary analysis of each Policy Development Zone (PDZ) which includes a detailed assessment at the policy unit level; and

- 2) Secondary analysis which seeks to establish the overall effects at the PDZ management area level and the plan as a whole.

4.1.7 The primary analysis has been recorded on a series of detailed tables, which fully document the effect of each PDZ management area and associated policy units in regards to the SEA objectives, indicators and targets (assessment criteria) presented in **Table 2.2**. These have been assessed against the significance criteria assessment presented in **Table 2.1**.

4.1.8 **Tables 4.3 to 4.22** present a PDZ by PDZ summary, which reports in summary the detailed assessment of each Policy Unit of the preferred policies (See **Appendices A to D**). The policies cannot at this strategic level result in all positive effects and achievement (or no effect) of all objectives, due to the very locally influenced impacts. Consequently, the achievement or conflict to achievement of an objective presented within these tables is often specific to small areas within the PDZ, as is often the case. **Section 4.2** provides an assessment of the trends and findings that have emerged from the detailed assessment. A WFD assessment and cumulative assessment is also provided in **Section 4.2**.

Note: That during the assessment, the setting of historical features has not been assessed at this stage as policy does not identify specific actions and as such the effect of policies on setting (as opposed to physical disturbance) cannot be ascertained. However, any scheme would need to be undertaken in a sensitive and appropriate manner, which would also include the need to avoid or minimise the impact on the visual setting of listed buildings and Scheduled Monuments.

During the detailed assessment (**Appendices A to D**) where a stretch of coastline already has a defence structure in place in many cases a further HTL policy has been assessed as having a neutral impact in epoch 1 based on the principle that under an NAI scenario the defences would not have deteriorated sufficiently in epoch 1 to result in the loss of a specific feature.

Key

	Major positive impact and achievement of objective across PDZ
	Moderate positive impact and achievement of objective across most of the PDZ
	Minor positive impact and achievement of objective across some of the PDZ
	Neutral or no significant improvement for this objective across the PDZ
	Minor negative impact and deleterious effect on objective at some locations across the PDZ
	Moderate negative impact and deleterious effect on objective across most of the PDZ
	Major negative impact and deleterious effect on objective across the whole PDZ
?	Unknown or insufficient data

Table 4.1 Comparison of SEA Objectives against and within SEA Objectives

Objectives	To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	To maintain and enhance the geomorphological characteristics of natural features.	To prevent pollution of soil and ensure no deterioration in water quality.	To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	To minimise the impact of policies on marine operations and activities.	To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	To minimise coastal flood and erosion risk to people and residential property; community, recreational, amenity facilities and other industrial, commercial, tourism, and defence assets.
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	Green	Green	Green	Green	Green	Orange	Green	Orange	Green	Orange	Orange	Green
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	Green	Green	Green	Green	Green	Orange	Green	Orange	Green	Orange	Orange	Green
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Green	Green	Green	Green	Green	Orange	Green	Orange	Green	Orange	Orange	Green
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Green	Green	Green	Green	Green	Orange	Green	Orange	Orange	Orange	Orange	Green

Objectives	To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	To maintain and enhance the geomorphological characteristics of natural features.	To prevent pollution of soil and ensure no deterioration in water quality.	To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	To minimise the impact of policies on marine operations and activities.	To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	To minimise coastal flood and erosion risk to people and residential property; community, recreational, amenity facilities and other industrial, commercial, tourism, and defence assets.
To maintain and enhance the geomorphological characteristics of natural features.	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
To prevent pollution of soil and ensure no deterioration in water quality.	Green	Green	Green	Green	Light Blue	Green	Green	Green	Light Blue	Light Blue	Light Blue	Green
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	Green	Green	Green	Green	Green	Light Blue	Green	Green	Green	Green	Green	Green
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

Objectives	To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	To maintain and enhance the geomorphological characteristics of natural features.	To prevent pollution of soil and ensure no deterioration in water quality.	To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	To minimise the impact of policies on marine operations and activities.	To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	To minimise coastal flood and erosion risk to people and residential property; community, recreational, amenity facilities and other industrial, commercial, tourism, and defence assets.
To minimise the impact of policies on marine operations and activities.	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
To minimise coastal flood and erosion risk to people and residential property; community, recreational, amenity facilities and other industrial, commercial, tourism, and defence assets.	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

Table 4.2 Achievement of SEA Objectives across the SMP

SEA Objective	Achievement of SEA Objective			
	NAI	MR	HTL	ATL
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	Green	Green	Green	Green
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	Green	Green	Green	Green
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Green	Green	Green	Green
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Green	Orange	Orange	Orange
To maintain and enhance the geomorphological characteristics of natural features.	Green	Green	Green	Orange
To prevent pollution of soil and ensure no deterioration in water quality.	Orange	Orange	Green	Green
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	Green	Green	Green	Orange
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	Orange	Green	Green	Green
To minimise the impact of policies on marine operations and activities.	Orange	Green	Green	Orange
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Orange	Orange	Green	Green
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	Orange	Green	Green	Orange
To minimise coastal flood and erosion risk to people and residential property; community, recreational, amenity facilities and other industrial, commercial, tourism, and defence assets.	Green	Green	Green	Green
	Orange	Orange	Orange	Orange

Key for Tables 4.3 to 4.22

Key

	Major positive impact and achievement of objective across PDZ
	Moderate positive impact and achievement of objective across most of the PDZ
	Minor positive impact and achievement of objective across some of the PDZ
	Neutral or no significant improvement for this objective across the PDZ
	Minor negative impact and deleterious effect on objective at some locations across the PDZ
	Moderate negative impact and deleterious effect on objective across most of the PDZ
	Major negative impact and deleterious effect on objective across the whole PDZ
?	Unknown or insufficient data

Table 4.3 Achievement of SEA Objectives for PDZ 1 - St Anne's Head to Borough Head

PDZ 1				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Unit 1.1 to 1.3				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				Relocation or realignment
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				Relocation
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.4 Achievement of SEA Objectives for PDZ 2 - Borough Head to Dinas Fach

PDZ 2				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 2.1 to 2.13				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	Red	Red	Light Blue	
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	Light Blue	Light Blue	Green	Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Red	Red	Light Blue	Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Light Blue	Light Blue	Light Blue	
To maintain and enhance the geomorphological characteristics of natural features.	Light Blue	Light Blue	Light Blue	
To prevent pollution of soil and ensure no deterioration in water quality.	Light Blue	Light Blue	Light Blue	
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	Green	Green	Green	Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	Green	Green	Green	Excavation and recording
To minimise the impact of policies on marine operations and activities.	Green	Green	Green	
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Green	Light Blue	Light Blue	Relocation or realignment
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	Light Blue	Light Blue	Light Blue	
To minimise coastal flood and erosion risk to people and residential property.	Green	Green	Light Green	Relocation
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.	Light Blue	Green	Green	Realignment of coastal path (PU 2.9)
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.	Red	Red	Red	
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.	Light Blue	Light Blue	Light Blue	

Table 4.5 Achievement of SEA Objectives for PDZ 3 - Dinas Fach to Pen Anglas

PDZ 3				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 3.1 to 3.12				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	Red	Red	Red	Habitat creation
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	Red	Red	Red	Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Red	Red	Red	Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Light Blue	Light Blue	Light Blue	
To maintain and enhance the geomorphological characteristics of natural features.	Light Blue	Light Blue	Light Blue	
To prevent pollution of soil and ensure no deterioration in water quality.	Light Blue	Light Blue	Light Blue	
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	Green	Green	Green	Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	Green	Dark Green	Dark Green	Excavation and recording
To minimise the impact of policies on marine operations and activities.	Light Blue	Orange	Orange	
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Green	Green	Green	Relocation or realignment
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	Light Blue	Light Blue	Light Blue	
To minimise coastal flood and erosion risk to people and residential property.	Light Blue	Light Green	Light Green	Relocation
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.	Light Blue	Green	Green	Realignment of coastal path (PU 3.12)
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.	Light Blue	Red	Red	
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.	Light Blue	Light Blue	Light Blue	

Table 4.6 Achievement of SEA Objectives for PDZ 4 - Pen Anglas to Pen-y-Bal

PDZ 4				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 4.1 to 4.19				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				Relocation or realignment
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				Relocation
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				Relocation
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.7 Achievement of SEA Objectives for PDZ 5 - Pen y Bal to Cardigan

PDZ 5				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 5.1 to 5.15				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				Relocation
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.8 Achievement of SEA Objectives for PDZ 6 - Pencribach to New Quay Head

PDZ 6				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 6.1 to 6.8				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				Relocation or realignment
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				Realignment of coastal path (PU 6.3)
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.9 Achievement of SEA Objectives for PDZ 7 - New Quay Head to Llanina Point

PDZ 7				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Unit 7.1 to 7.6				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				Relocation
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.10 Achievement of SEA Objectives for PDZ 8 - Gilfach to Llanrhystud

PDZ 8				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 8.1 to 8.10				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.11 Achievement of SEA Objectives for PDZ 9 - Carreg to Sarn Gynfelyn

PDZ 9				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 9.1 to 9.13				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				Relocation
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.12 Achievement of SEA Objectives for PDZ 10 - Upper Borth to Tonfanau

PDZ 10				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 10.1 to 10.19				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	Red	Red	Red	Habitat creation
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	Light Green	Light Green	Light Green	Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Red	Red	Red	Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Light Blue	Light Blue	Light Blue	
To maintain and enhance the geomorphological characteristics of natural features.	Light Blue	Light Blue	Light Blue	
To prevent pollution of soil and ensure no deterioration in water quality.	Light Blue	Light Blue	Orange	
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	Light Green	Light Green	Light Green	
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	Orange	Green	Red	Excavation and recording
To minimise the impact of policies on marine operations and activities.	Light Blue	Green	Light Blue	
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Green	Dark Green	Dark Green	Relocation or realignment
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	Orange	Orange	Orange	
To minimise coastal flood and erosion risk to people and residential property.	Light Blue	Green	Green	Relocation
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.	Light Blue	Orange	Orange	
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.	Light Blue	Green	Green	
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.	Light Blue	Light Blue	Light Blue	

Table 4.13 Achievement of SEA Objectives for PDZ 11 - Tonfanau to Mochras

PDZ 11				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 11.1 to 11.20				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				Monitoring and appropriate design
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				Relocation or realignment
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				Relocation
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.14 Achievement of SEA Objectives for PDZ 12 - Mochras to Pen ychain

PDZ 12				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 12.1 to 12.25				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				Monitoring and appropriate design
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				Relocation or realignment
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				Relocation
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.15 Achievement of SEA Objectives for PDZ 13 - Pen ychain to Trwyn Cilan

PDZ 13				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 13.1 to 13.19				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.16 Achievement of SEA Objectives for PDZ 14 - Trwyn Cilan to Carreg Ddu

PDZ 14				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 14.1 to 14.11				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				Monitoring and appropriate design
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.17 Achievement of SEA Objectives for PDZ 15 Carreg Ddu to Trwyn y Tal

PDZ 15				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 15.1 to 15.6				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.18 Achievement of SEA Objectives for PDZ 16 - Trwyn Dylan to Llanfairfechan

PDZ 16				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 16.1 to 16.33				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.	Red	Red	Red	Habitat creation
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	Light Blue	Light Blue	Light Blue	Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Red	Green	Green	Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Light Blue	Light Blue	Light Blue	
To maintain and enhance the geomorphological characteristics of natural features.	Light Blue	Light Blue	Light Blue	
To prevent pollution of soil and ensure no deterioration in water quality.	Light Blue	Light Blue	Light Blue	
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.	Green	Green	Green	Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	Orange	Orange	Orange	
To minimise the impact of policies on marine operations and activities.	Light Green	Green	Green	
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Light Blue	Green	Green	Realignment of coastal roads (PU 16.11/16.25)
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	Light Blue	Orange	Orange	
To minimise coastal flood and erosion risk to people and residential property.	Light Blue	Green	Orange	Relocation of properties
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.	Light Blue	Green	Orange	Relocation
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.	Light Blue	Green	Light Green	
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.	Light Blue	Orange	Orange	Relocation of trout farm (PU 16.1) and air field (PU 16.4)
	Light Blue	Light Blue	Light Blue	

Table 4.19 Achievement of SEA Objectives for PDZ 17 – Pen-y-parc to Penrhyn (Holyhead)

PDZ 17				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 17.1 to 17.23				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				Sensitive design of HTL and MR actions
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				Relocation
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.20 Achievement of SEA Objectives for PDZ 18 – Penrhyn (Holyhead) to Porth Helygen (North Anglesey)

PDZ 18				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 18.1 to 18.18				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				Relocation of path (PU 18.1/18.5)
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.21 Achievement of SEA Objectives for PDZ 19 - Porth Helygen to Trwyn Penmon (including Puffin Island)

PDZ 19				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 19.1 to 19.17				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.22 Achievement of SEA Objectives for PDZ 20 - Llanfairfechan to Great Orme's Head

PDZ 20				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
Policy Units 20.1 to 20.19				
To avoid adverse impacts on, conserve, and where practical enhance the favourable conservation status of internationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.				Habitat creation
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.				Habitat creation
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				
To maintain and enhance the geomorphological characteristics of natural features.				
To prevent pollution of soil and ensure no deterioration in water quality.				
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives.				Sensitive design of HTL and MR actions
To minimise coastal flood and erosion risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.				Excavation and recording
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				
To minimise coastal flood and erosion risk to people and residential property.				
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

4.2 Primary Trends of the PDZs

4.2.1 The detailed assessment is provided in **Appendices A to D**, where each policy or policy option has been assessed for each PDZ/policy unit. An assessment/discussion of the trends and findings that have emerged from this detailed assessment is provided below (in order of the objectives presented in **Table 2.2**) based on the key environmental receptors of this SMP (i.e. biodiversity, landscape, historic environment, material assets, and population and community. Reasoning behind policy selection associated with key impacts is also briefly discussed along with quantification of the significance of the impacts. Mitigation measures are provided in **Section 5**.

PDZ 1: St Anns Headland – St Anns Head to Borough

Biodiversity, Flora and Fauna

4.2.2 No impacts are identified for SPA or SAC within this PDZ.

4.2.3 The PDZ is NAI for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected for Dale and South Marloes Coast SSSI and De Porth Sain Ffraid / St Brides Bay South SSSI. No BAP habitats were assessed in response to the NAI policy for all three epochs.

Geology and Geomorphology

4.2.4 No impact on geological designations is anticipated for this PDZ.

Landscape

4.2.5 No impact on landscape features or designations.

Historic Environment

4.2.6 Out of a total of 28 designated heritage features identified along this stretch of coastline, nine of these will not be impacted upon by this policy. However, in response to natural erosion rates of the shoreline the following features have the potential to be damaged or lost for PUs 1.1 and 1.2:

- Hilfort SM at Little Castle Point;
- Deserted early settlement at Westdale Bay;
- Defence post at Hoopers Point;
- Fringe Range at Hoopers Point;
- Greatmire Hill at Marloes Sands;
- Monastery SM at Gateholm Island;
- SM at Water Bay;
- SM at Jack Sound;
- Deer Park Fort SM at Jack Sound;

- Landing Point at Martins Haven;
- Reservoir at West Hook Farm;
- Observation Post at Howney Stone;
- Medieval Quarry at Hopgang;
- Post Medieval Quarry at Musselwick Mouth;
- Tower Point Rath SM at Tower Point;
- Castle Head defended enclosure at Castle Head;
- Lime Kiln at St Brides Haven;
- St Brides Castle (Historic Parks and Gardens);
- SMs at Mill Haven (e.g. Lime Kiln); and
- Small village with many archaeological and historic features, including a church, burial grounds, chapel and tower and Listed Buildings.

4.2.7 Within this PDZ, undesignated archaeological features are found in PUs 1.1 and 1.2 with up to 22 archaeological features being lost or damaged through the policy of NAI for all three epochs. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

4.2.8 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

4.2.9 As this PDZ is NAI for all three epochs, none of the policies have a significant impact on marine activities or access.

4.2.10 No significant impacts are anticipated in this PDZ to critical infrastructure.

Population and Community

4.2.11 No key properties were identified in this PDZ.

4.2.12 No significant impacts are anticipated to key community, recreational and amenity facilities in this PDZ.

4.2.13 No key industrial, commercial, economic and tourism assets and activities assets were identified in this PDZ.

PDZ 2: Borough Head to Cwm Bach

Biodiversity, Flora and Fauna

- 4.2.14 The HTL policy for Little Haven (PU 2.2), Southern and central Broad Haven (PU 2.4), Broad Haven North (PU 2.5), Haroldston Hill (PU 2.6), and Nolton Haven (PU 2.8) could result in constraint to the natural development of intertidal sandflat as a result of sea level rise, which could restrict beach width (and extent of pupping area for grey seals) and result in a reduction in the extent of the intertidal sandflat feature. Consequently, an adverse effect on integrity on the Pembrokeshire Marine SAC could occur. Scheme level mitigation measures may be appropriate in order to minimise the extent of potential habitat loss particularly in epoch 2. The IROPI case will need to be made for these policies and compensatory habitat created where appropriate.
- 4.2.15 Similar to the Natura 2000 site of Pembrokeshire Marine SAC, the habitat interest features in particular the intertidal habitats/communities of the Arfordir Niwngwl-Aber Bach / Newgale to Little Haven Coast SSSI and St. Davids Peninsula Coast SSSI could be restricted in their natural development. This will occur for PUs 2.5, 2.6 and 2.8 for HTL (epoch 1 and 2). The mitigation measures for habitat loss are likely to overlap with the compensatory habitat requirements for the Natura 2000 Sites, though some additional habitat creation may be necessary for terrestrial habitats.
- 4.2.16 The HTL policy for Little Haven (PU 2.2), Broad Haven North (PU 2.5) could result in a minor constraint to the natural development of intertidal BAP sandflat habitat as a result of sea level rise the area potentially affected is very small and the risk is considered insignificant.
- 4.2.17 The MR policy at Newgale Sands south (PU 2.10) and Newgale Sands north (PU 2.11) could result in the loss of fen, marsh and swamp BAP habitat as a result of coastal rollback of the shingle ridges. The MR policy in Broad Haven North (PU2.5), Haroldston Hill (PU2.6), Nolton Haven (PU2.8), Newgale Sands south (PU 2.10), Newgale Sands north (PU 2.11) and Newgale village (PU2.12) could result in the loss of terrestrial BAP habitat features including coastal and floodplain grazing marsh, broadleaved mixed Yew woodland, bracken and dwarf shrub heath. Littoral Rock BAP habitat is not anticipated to be affected by any policies in this PU.
- 4.2.18 The following BAP habitats would need to be created; fen, marsh and swamp, broadleaved mixed Yew woodland, bracken and dwarf shrub heath. MR policies are likely to result in the creation of additional littoral sediment BAP habitat which is likely to offset any losses resulting from HTL policy.

Geology and Geomorphology

- 4.2.19 The policy of MR for PUs 2.2, 2.8, and 2.10 may cause erosion rates associated with the geological interest feature of the Arfordir Niwngwl-Aber Bach / Newgale to Little Haven Coast SSSI to occur at a relatively slower rate. This will result in a minor negative impact.

Landscape

- 4.2.20 No impact on National Park or Heritage Coast, and moderate positive impact on Conservation Area in PU 2.2.

Historic Environment

- 4.2.21 There are 5 designated heritage features identified along this stretch of coastline. The only feature to be potentially impacted upon within this PDZ through damage or loss as a result of NAI policy is Black Point Rath Hillfort at Broad Haven (PU 2.7). Monitoring or localised management of shoreline retreat may reduce the potential damage or loss of this heritage feature depending upon the impacts of this type of management to other environmental designations.
- 4.2.22 Within this PDZ, undesignated archaeological features are found in PUs 2.1, 2.3, 2.5, 2.7, 2.11, and 2.13 with up to 11 archaeological features being lost or damaged through the policy of NAI predominately for all three epochs. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

Material Assets

- 4.2.23 The HTL policies for all epochs in PU 2.4 and PU 2.8 would sustain the slipways at Broad Haven and Nolton Haven and beach access would be maintained.
- 4.2.24 There are three critical infrastructure features identified along this stretch of coastline and two may be significantly impacted:
- Coastal road and car park at Newgale Sands (PU 2.11); and
 - Coastal road at Broad Haven (PU 2.3).
- 4.2.25 Impacts may be mitigated at Newgale Sands by re-location of the car park and the A487 in land. At Broad Haven, Walton Hill provides alternative access between the villages.

Population and Community

- 4.2.26 Of the six features/properties identified within this PDZ, the major impact of the preferred management policy of MR will be along PU 2.11 (epoch 2 and 3). This will be associated with the Café at southern car park; Pinch Cottage, property at car park; and several properties at New Gale Village to northern end of the beach which will be potentially at risk from erosion. Mitigation such as relocation of commercial business properties may be required.
- 4.2.27 There are three recreational amenity assets identified in this PDZ including the Coastal footpath at Druidston Haven and Broad Haven to Newgale and the road and car park at Nolton Haven. The only feature significantly affected is the coastal path in PU 2.9 (Broad Haven to Newgale) sections of which may be lost due to erosion. The mitigation for these losses would be to realign sections of the route inland. There is adequate space for this to occur.
- 4.2.28 No key industrial, commercial, economic and tourism assets and activities assets were identified in this PDZ.

PDZ 3 Dinas Fach to Pen Anglas

Biodiversity, Flora and Fauna

- 4.2.29 HTL is proposed for all epochs in PUs 3.3 (Solva Harbour) and 3.5 (Porth Clais inner), for epochs 1 and 2 in PU 3.2 (Lower Solva), and for epoch 1 only in PUs 3.4 (Porth Clais outer) and 3.8 (Whitesands Bay), in order to protect transport infrastructure in order to provide appropriate time for adaptation and response. The HTL policies at these units could result in constraint to the natural development of intertidal sandflat as a result of sea level rise, which could restrict beach width (and extent of pupping area for grey seals) and result in a reduction in the extent of intertidal sandflat feature. Consequently, an adverse effect on integrity on the Pembrokeshire Marine SAC could occur. Scheme level mitigation measures may be appropriate in order to minimise, or in the case of Whitehaven avoid, the extent of potential habitat loss particularly in epochs 1 and 2.
- 4.2.30 Similar to the Natura 2000 Site of Pembrokeshire Marine SAC, the habitat interest features in particular the intertidal habitats/communities of the St. Davids Peninsula Coast SSSI could be restricted in their natural development. This will occur for PU 3.3, 3.4 and 3.5 for HTL for the majority of epochs. The mitigation measures for habitat loss are likely to overlap with the compensatory habitat requirements for the Natura 2000 Sites, though some additional habitat creation may be necessary for terrestrial habitats.
- 4.2.31 HTL is proposed for all epochs in PU 3.3 (Solva Harbour) and PU 3.10 (Porth Gain) and for epoch 1 only in PU 3.4 (Porth Clais outer) and PU 3.8 (Whitesands Bay). HTL policies could result in a minor constraint to the natural development of intertidal sandflat habitat as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of littoral sediment BAP habitat. The areas at risk are considered insignificant and the impacts are anticipated to be only minor.
- 4.2.32 The MR policies at in PU 3.8, PU 3.9 (Abereididi), and PU 3.11 (Aber Castle) could result in the loss of small areas of terrestrial BAP habitat including coastal and floodplain grazing marsh and broadleaved mixed Yew woodland. Mitigation for this loss of broadleaved mixed Yew woodland would be habitat creation. MR policies are likely to result in the creation of additional littoral sediment BAP habitat e.g. PU 3.9 which are likely to offset any losses resulting from HTL policy.

Geology and Geomorphology

- 4.2.33 No impact on geological designations is anticipated for this PDZ. However, annual losses to the sea due to erosion do naturally occur along the Aber Mawr SSSI and thus document and recording of features may be required for this site.

Landscape

- 4.2.34 No impact on Heritage Coast, with a moderate positive impact on Conservation Area in PUs 3.3 and 3.10, and a minor positive impact on the National Park across the PDZ.

Historic Environment

4.2.35 Out of 38 identified designated heritage features within this PDZ, twenty-two features are likely to be impacted upon due to damage or loss as a result of NAI policy along PUs 3.1, 3.3, 3.11, and 3.12. These include:

- Dinas Fach Defended enclosure (SM) at Dinas Fach;
- Lime kiln and Listed Buildings at Solva;
- Porth y Rhaw camp (SM) at Segar Rock;
- Caerfai Camp (SM) at Pempleidian;
- Grade II Listed Building at Penporthclais;
- Lime kiln on south side of estuary;
- Castell Heinif (SM) Promontory Fort at Castell Heinif;
- Hut circles and Ancient Enclosures (SM) NW of Carn Ilidi at Porthmelgan;
- St David's Head Camp (SM);
- Castell Coch Promontory Fort (SM);
- Caerau Promontory Forts (SM) at Caerau;
- Aberfelin Mill (SM) at Abermawr;
- Promontory Fort (SM) at Pen Castell Coch;
- Castell Coch Promontory Fort (on Penmorfa) (SM) at Porth Mawr;
- Defended Enclosure (SM) at Carreg Golchfa;
- Monument (SM) at Pwll Deri;
- Dinas Mawr Camp (SM) at Dinas Mawr;
- Ynys y Castell SM hillfort (SM) at Ynys y Castell;
- Submerged forest (Heritage Coast) at Abermawr;
- Submarine Listening Station at Abermawr;
- War memorial, settlement at Solva; and
- Submerged forest (Heritage Coast) at Whitesands Bay.

4.2.36 However, the following sites will be positively protected by the preferred management policy of HTL (epoch 2 and 3):

- Porthgain quarry (SM) at Porthgain (PU 3.1);
- Heritage Site, Listed buildings at Porthgain (PU 3.1); and
- St Patrick's Chapel (SM) at Whitesands Bay (PU 3.8).

4.2.37 Within this PDZ, six undesignated archaeological features associated with PU 3.1, 3.4, and 3.12 have the potential to be lost or damaged through the policy of NAI or MR. However, more than 15 archaeological features will continue to be protected under HTL for various policy units. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

- 4.2.38 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

- 4.2.39 The slipway and access in PU 3.11 at Abercastle would not be affected in epoch 1 with the HTL policy but the MR policies in the remaining epochs would allow the shoreline to rollback leading to the loss of the present marine access which would need to be adapted and reconfigured to maintain access.
- 4.2.40 The slipway and access at Porthclais Harbour (PU 3.5) is likely to be maintained for all epochs subject to local funding, although in the third epoch the access road would be at risk to flooding.
- 4.2.41 The lifeboat station at St Justinians would be excluded from the NAI policy for all epochs and would therefore be maintained in epochs 2 and 3. Similarly the lifeguard station at Whitesands Bay would require adaption in epochs 2 and 3 with MR policies and therefore its function is likely to be maintained.
- 4.2.42 No significant impacts are anticipated in this PDZ to critical infrastructure.

Population and Community

- 4.2.43 Of the five features/properties identified within this PDZ, the major impact of the preferred management policy of NAI which will allow natural erosion / retreat and potential loss of properties will be along PU 3.1 (all epochs). This will be associated with footpath, road and residential properties of Aberdraw. Mitigation such as relocation of properties may be required.
- 4.2.44 The only significant impact in this PDZ relates to the loss of parts of the coastal path in PU 3.12 at Abermawr as a result of the NAI policies in epochs 2 and 3. The mitigation for this loss would be the relocation of parts of the coastal path inland.
- 4.2.45 No key industrial, commercial, economic and tourism assets and activities assets were identified in this PDZ.

PDZ 4 Pen Anglas to Pen-y-Bal

Biodiversity, Flora and Fauna

- 4.2.46 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.47 Within this PDZ, no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected for Creigiau Abergwaun (Fishguard Cliffs) SSSI and Newport Cliffs SSSI.



- 4.2.48 The only HTL policies assessed as resulting in a potential significant loss of sandflat habitat in this PDZ is for epochs 2 and 3 in PU 4.2 (Fishguard Harbour). There is a risk of minor losses of intertidal habitat in epoch 1 for HTL policies in PU 4.2 and 4.3 (The Parrog and Goodwick Moor), epoch 2 in PU 4.15 (Newport Parrog), and epoch 3 in PUs 4.7 (Lower Town Quay) and 4.12 (Cwm-yr-Eglwys). However the area at risk is considered small and any impacts are assessed as having only a minor negative impact on the extent of littoral sediment BAP habitat.
- 4.2.49 MR policies in PUs 4.3, 4.6, 4.14, and 4.18 (Newport Sands) could result in the loss of terrestrial BAP habitats including; broadleaved mixed Yew woodland and bracken. The mitigation for these losses would be habitat creation.
- 4.2.50 MR policies are likely to result in the creation of additional littoral sediment BAP habitat in areas such as PUs 4.14 and 4.15 which are likely to offset any losses resulting from HTL policy. Furthermore much of the coast is cliff and HTL policies refer to small or localised stretches of coast.

Geology and Geomorphology

- 4.2.51 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.52 No impact on National Park and Heritage Coast, and a moderate positive impact on a Conservation Area in PUs 4.3, 4.6, and 4.7, and a minor negative impact on a Conservation Area in PU 4.18.

Historic Environment

- 4.2.53 Out of 14 identified designated heritage features within this PDZ, several features are likely to be effected by erosion as a result of NAI or MR policy. These include:
- Listed Buildings (Ty Mawr and Limekiln adjacent to Kilnhouse) at Newport, Parrog (PU 4.15);
 - Bridge Cottages (Listed Buildings) at Goodwick (PU 4.3);
 - Old Fort (Listed Building) at Lower town Fishguard (PU 4.8);
 - Old Fort (Listed Building) at Castle Point (PU 4.8); and
 - Lime kiln on Aberfforest Beach (Listed Building) at Aberfforest Beach (PU 4.13).
- 4.2.54 However, the following sites will be positively protected by the preferred management policy of HTL (all epochs):
- Listed Buildings at Lower Town Fishguard (PU 4.6).
- 4.2.55 Within this PDZ, eighteen undesignated archaeological features associated with PUs 4.4, 4.9, 4.11, 4.13, and 4.16 have the potential to be lost or damaged through the policy of NAI or MR. However, more than 11 archaeological features will continue to be protected under HTL for various policy units **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

- 4.2.56 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

- 4.2.57 The HTL policies for all epochs in PU 4.2 (Fishguard Harbour) would maintain the harbour and marina and its function.
- 4.2.58 Under the NAI policies in epochs 2 and 3 in PU 4.14 at Newport Parrog erosion is likely to reduce and lead to the loss of boating access at TyCanol Farm. The HTL policy for the first 2 epochs in PU 4.15 would ensure continued access and use of the sailing club. This access would require realignment with the MR policy in epoch 3.
- 4.2.59 Road and rail infrastructure at Fishguard (PU 4.2) may be positively impacted. As defences within the harbour will be maintained protecting the railway line and roads.
- 4.2.60 The coastal road at Penyraber (PU 4.4) may be impacted by accelerated erosion due to SLR affecting the road and preventing access. Mitigation could be achieved through realignment of the road.

Population and Community

- 4.2.61 Of the six features/properties identified within this PDZ, the major impact of the preferred management policy of MR along (PU 4.15) will potentially lead to loss of some properties such as the Sailing Club at Newport, Parrog. Mitigation such as relocation of the sailing club and monitoring of erosion and properties at Feidr Brenin may be required. However, along PU 4.6 at Lower Town Fishguard the MR policy will have a positive impact as the realignment of the defences would still include defence to the properties.
- 4.2.62 The only significant impact in this PDZ relates to the loss of parts of the coastal path in PU 4.13 at Aberforest Beach as a result of the NAI policies in epochs 2 and 3. The MR policy in PU 4.17 Newport Sands for epoch 2 may also impact upon the car park although the extent would depend on the details of the realignment.
- 4.2.63 The mitigation for this loss would be the relocation of parts of the coastal path and car park inland.
- 4.2.64 No key industrial, commercial, economic and tourism assets and activities assets were identified in this PDZ.

PDZ 5 Pen y Bal to Cardigan

Biodiversity, Flora and Fauna

- 4.2.65 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.66 Within this PDZ, no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected for Aberarth-Carregwylan SSSI, Newport Cliffs SSSI, Afon Teifi SSSI, Caeau Crug Bychan SSSI, and Ty Gwyn A Llwyn Ysgaw SSSI.
- 4.2.67 The only HTL policies with the potential risk for causing any significant reduction in intertidal BAP habitat due to sea level rise occur in PU 5.7 (Coronation Drive) in epoch 2 and PU 5.8 (Gwbert Road) in epochs 2 and 3 with a risk of a maximum 0.6ha of intertidal mudflat and 3.2ha of sandflat in total throughout all epochs.
- 4.2.68 MR policies in PU 5.3 (Poppit Dunes and Pen-yr-Ergyd) and PU 5.7 could result in the loss of terrestrial BAP habitats of coastal and floodplain grazing marsh and broadleaved mixed Yew woodland. The mitigation for the loss of broadleaved mixed Yew woodland would be habitat recreation subject to MR policy details.
- 4.2.69 MR policies are likely to result in the creation of additional littoral sediment BAP habitat in areas such as PU 5.3 which are likely to offset any losses resulting from HTL policy.

Geology and Geomorphology

- 4.2.70 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.71 No impact on National Park, Heritage Coast, or AONB, though minor negative impact on Historic Landscape Area in PUs 5.5, 5.7, 5.8, 5.11, and 5.12, which could be reduced through sensitive and appropriate design at the scheme level.

Historic Environment

- 4.2.72 Out of 10 identified designated heritage features within this PDZ, three features are likely to be affected by erosion or disturbance as a result of NAI or HTL policy. These include:
- Promontory Fort (SM) at Castell Tre-Riffith (PU 5.1);
 - Religious features, mortuary, chapel (SM) at Mwnt (PU 5.15); and
 - Remains of pre Norman house (Listed Building) (PU 5.8).
- 4.2.73 For this PDZ the HTL policy for PU 5.8 in conjunction with SLR will lead to deterioration of the Listed Building which is within the intertidal zone.
- 4.2.74 However, the following site will be positively protected by the preferred management policy of HTL (epoch 2 and 3):
- Several Listed Buildings and SMs at Cardigan (PU 5.12).

- 4.2.75 Within this PDZ, five undesignated archaeological features found in PUs 5.1, 5.3, 5.8, and 5.15 have the potential to be lost or damaged through the policy of NAI or MR. However, two archaeological features will continue to be protected under HTL for PU 5.8. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.
- 4.2.76 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

- 4.2.77 Under the NAI policy for all epochs in PU 5.4 the 2 slipways at St Dogmaels estuary would be affected by erosion and eventually lost in epoch 3.
- 4.2.78 Of the five features identified within this PDZ, no significant impacts are anticipated for infrastructure.

Population and Community

- 4.2.79 Of the six features/properties identified within this PDZ, the major impact of the preferred management policy of HTL along (PU 5.12) will potentially be associated with regular flooding of the properties on the waterfront, although erosion protection will be maintained. Mitigation such as: a) early warning systems for flooding, and b) relocation of commercial properties.
- 4.2.80 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.
- 4.2.81 No significant impacts to assets are anticipated in this PDZ, however the policy of MR (epoch 2 and 3) will have a positive impact on the Caravan Park Site at Gwbert along PU 5.3 (i.e. continued and controlled protection).

PDZ 6 Pencribach to New Quay Head

Biodiversity, Flora and Fauna

- 4.2.82 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.83 Within this PDZ, no direct or indirect effects on the SSSI interest features as a result of coastal management policy are expected for Aberarth-Carreg Wylan SSSI.
- 4.2.84 The HTL policy for all epochs in PU 6.2 (Aberporth) could result in a very minor constraint to the natural development of intertidal habitat as a result of sea level rise. There is a potential risk of small reduction in sandflat BAP habitat in epochs 2 and 3 with a potential loss of up to 0.5ha in total throughout all epochs.



- 4.2.85 MR policy in epochs 2 and 3 of PU 6.4 (Tresaith) could result in a small reduction of broadleaved mixed Yew woodland habitat. These MR policies are likely to result in the creation of additional littoral sediment BAP habitat in these epochs. The mitigation for the loss of littoral sediment habitat in PU 6.2 would be habitat creation and similarly for the loss of broadleaved mixed Yew woodland in PU 6.4, although this would be subject to the MR policy details.

Geology and Geomorphology

- 4.2.86 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.87 No impact on landscape designations.

Historic Environment

- 4.2.88 Out of eight identified designated heritage features within this PDZ, three features are likely to be affected by erosion as a result of NAI and MR policy. These include:

- Castell Bach (SM) at Penbryn (PU 6.3);
- Shipyards at Llangrannog (PU 6.6);
- Castell Bach (SM) at Cwmtwydy (PU 6.7); and
- Former Lime Kiln (Listed Building) at Cwmtwydy (PU 6.8).

- 4.2.89 Within this PDZ, ten undesignated archaeological features found in PUs 6.4, 6.5, 6.6, 6.7, and 6.8 have the potential to be lost or damaged through the policy of NAI or MR. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

- 4.2.90 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

- 4.2.91 At Aberporth the HTL policy for all epochs would maintain the operation of the sailing club. Of the two features identified within PDZ 6, the MoD Royal Aircraft Establishment at Aberporth (PU 6.1) will be impacted upon through damage or loss by the policy of NAI. Similarly, the treatment plant may also be impacted upon through damage by erosion. Mitigation could be achieved through re-location of parts of the airbase and treatment plant (or local protection).

Population and Community

- 4.2.92 No significant impacts to features/properties are anticipated in this PDZ, however the policy of HTL (epoch 2 and 3) will have a positive impact along PU 6.1 by maintaining



defences along the properties of Aberporth and especially those above Traeth Dyffryn will remain protected.

- 4.2.93 Of the seven features identified within PDZ 6 only four would be significantly affected. The NAI policies for all epochs in PU 6.3 would lead to the coastal footpath becoming unsafe in epoch 3. Mitigation could be achieved through the realignment of the coastal path inland.
- 4.2.94 There would be a reduction in beach width at Aberporth Beach (PU 6.3) as a result of the HTL policy by epoch 3. Similarly MR policies in epochs 2 and 3 may result in the beach at Tresaith becoming steeper and less sandy. The MR policies in epochs 2 and 3 may also result in the current seafront road at Llangrannog becoming unsustainable with the requirement for an alternative road configuration.
- 4.2.95 No significant impacts to key industrial, commercial, economic and tourism assets and activities are anticipated in this PDZ.

PDZ 7 New Quay Head to Llanina Point

Biodiversity, Flora and Fauna

- 4.2.96 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.97 Within this PDZ, no direct or indirect effects on the SSSI interest features as a result of coastal management policy are expected for Aberarth-Carreg Wylan SSSI.
- 4.2.98 The HTL policies for PU 7.2 (Traeth y Dolau, New Quay Harbour to Penpolian) over epochs 2 and 3 could result in constraint to the natural development of intertidal habitat as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of littoral sediment BAP habitat. There is a potential risk of a major impact, with up to 1.2ha of sandflat habitat in total lost throughout all epochs.
- 4.2.99 The MR policies for all epochs in PU 7.3 (New Quay Bay) and the last epoch in PU 7.5 (Ceir Bach) could result in the loss of terrestrial BAP habitats including coastal and floodplain grazing marsh, broadleaved mixed Yew woodland and bracken. MR policies are likely to result in the creation of additional littoral sediment BAP habitat in areas such as PU 7.3, 7.4 (Llanina Point) and PU 7.5 which are likely to offset any losses resulting from HTL policy. Mitigation for the loss of broadleaved mixed Yew woodland and bracken would be habitat creation subject to the MR policy details.

Geology and Geomorphology

- 4.2.100 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.101 No impact on landscape designations.

Historic Environment



- 4.2.102 Listed Buildings are the only historic features within this PDZ which will not be impacted upon by the policy of HTL along PU 7.2 (major positive impact). However, for PU 7.1 two Listed Buildings will be impacted upon by NAI in which erosion may cause the loss of some of the historic feature (major negative impact).
- 4.2.103 Within this PDZ, five undesignated archaeological features found in PUs 7.1, 7.2, 7.3, 7.5, and 7.6 have the potential to be lost or damaged through the policy of NAI or MR. However, more than 7 archaeological features will continue to be protected under HTL for PU 7.2. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

Material Assets

- 4.2.104 The HTL policies for all epochs in PU 7.2 at Newquay would maintain assets including the Stone Pier, Harbour and lifeboat station, especially in epochs 2 and 3.
- 4.2.105 No critical infrastructure features were identified in this PDZ.

Population and Community

- 4.2.106 No significant impacts to properties are anticipated in this PDZ.
- 4.2.107 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.
- 4.2.108 No significant impacts to key industrial, commercial, economic and tourism assets and activities assets are anticipated in this PDZ.

PDZ 8 Gilfach yr halen Holiday Park to Carreg Ti-pw

Biodiversity, Flora and Fauna

- 4.2.109 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.110 Within this PDZ, no direct or indirect effects on the SSSI interest features as a result of coastal management policy are expected for Creigiau Aberarth-Morfa SSSI, and Traeth Llanon SSSI.
- 4.2.111 The HTL policy in PU 8.2 (Aberaeron South Beach) over 2 epochs, and all epochs in PU 8.3 (Aberaeron Harbour) are not anticipated to result in any significant loss of intertidal BAP habitats in these areas. There is a potential risk of a minor insignificant reduction in sandflat habitat in epochs 1 and 2 in PU 8.4 (Aberaeron North Beach) resulting from constraint to the natural development of intertidal habitat as a result of sea level rise. The only potentially significant reduction occurs in epoch 3 within PU 8.4 with a risk of up to 1.6ha of intertidal sandflat habitat lost in total throughout all epochs.
- 4.2.112 The MR policies in PUs 8.2, PU 8.6 (Aberarth), 8.8 (Llanon and Llansantffraid), and 8.9 (Llanrhystud Bay) could result in the loss of terrestrial BAP habitats of coastal and floodplain grazing marsh and broadleaved mixed Yew woodland. The mitigation for the losses of broadleaved mixed Yew woodland would be habitat creation. The MR policies

at PUs 8.8 and 8.9 are likely to result in the creation of additional littoral sediment BAP habitat.

Geology and Geomorphology

4.2.113 No impact on geological designations is anticipated for this PDZ.

Landscape

4.2.114 No impact on landscape designations.

Historic Environment

4.2.115 Out of eight identified designated heritage features within this PDZ, four features are likely to be affected by erosion or disturbance as a result of MR policy. These include:

- Weigh House Beach Parade (Listed Building) (PU 8.2);
- Fish traps at Llansantffraed (PU 8.8);
- Clifton / Manteg (Listed Buildings) (PU 8.8); and
- Aberstrincell or Graiglas Limekilns at Llanrhystud.

4.2.116 However, the following sites will be positively protected by the preferred management policy of HTL (epoch 2 and 3) and MR (epoch 3):

- Listed Buildings at Aberaeron (PU 8.2); and
- Listed Buildings at Aberarth (PU 8.6).

4.2.117 Within this PDZ, four undesignated archaeological features found in PU 8.2 have the potential to be lost or damaged through the policy of NAI or MR. However, more than 20 archaeological features will continue to be protected under HTL for PU 8.3. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

4.2.118 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

4.2.119 The HTL policy for all epochs in PU 8.3 at Aberaeron would maintain the harbour, slipways and beach access especially in later epochs.

4.2.120 No significant impacts are anticipated in this PDZ to critical infrastructure.

Population and Community

4.2.121 No significant impacts to properties are anticipated in this PDZ.

- 4.2.122 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.
- 4.2.123 No significant impacts to key industrial, commercial, economic and tourism assets and activities assets are anticipated in this PDZ.

PDZ 9 Carreg Ti-pw to Sarn Gynfelyn

Biodiversity, Flora and Fauna

- 4.2.124 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.125 Within this PDZ, no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected for Creigiau Cwm-Ceriw A Ffos-Las (Morfa Bychan) SSSI, Creigiau Pen Y Graig SSSI, Alltwn A Traeth Tanybwloch SSSI, Craigyfulfran & Clarach SSSI, and Borth-Clarach SSSI.
- 4.2.126 The only HTL policy with the potential risk of a reduction in BAP sandflat habitat occurring in PUs 9.7 (South Marine Terrace) and 9.9 (Marine Terrace and Victoria Terrace) where the policy may constrain natural development of intertidal habitat as a result of sea level rise. Up to 1.8ha in total of intertidal sandflat habitat could be lost throughout all epochs.
- 4.2.127 The MR policy for the first 2 epochs in PU 9.2 (Tan y Bwlch) would result in the loss of Fen, marsh and swamp and coastal and floodplain grazing marsh. The mitigation for the loss of these habitats would be habitat creation subject to the MR policy details. MR policies in PUs 9.2 and 9.11 (Clarach Bay) are likely to result in the creation of additional littoral sediment BAP habitat.

Geology and Geomorphology

- 4.2.128 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.129 No impact on landscape designations.

Historic Environment

- 4.2.130 Out of 4 identified designated heritage features, the only feature likely to be affected by erosion as a result of NAI policy (epoch 3) is the Tramway at Aberystwyth (PU 9.2). Monitoring or localised management of shoreline retreat may reduce the potential damage or loss of this heritage feature depending upon the impacts of this type of management to other environmental designations.
- 4.2.131 The following sites will be protected by the preferred management policy of HTL (epoch 2 and 3):
- Multiple Listed Buildings at Aberystwyth (PU 9.2); and
 - Aberystwyth Castle (SM) at Aberystwyth (PU 9.7).



- 4.2.132 Within this PDZ, three undesigned archaeological features found in PUs 9.1 and 9.2 have the potential to be lost or damaged through the policy of NAI or MR. However, more than 50 archaeological features will continue to be protected under HTL for PUs 9.3, 9.7, 9.8 and 9.9. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

Material Assets

- 4.2.133 At Tany Bwlch (PU 9.2/3) the shingle ridge is likely to breach in epoch 3 with NAI diverting the Afon Ystwyth through a new mouth. This would impact upon access to the estuary; however this is likely to be insignificant due to SLR and the increased tidal prism of the Afon Rheidol.
- 4.2.134 The HTL policies for all epochs in the harbour, marina and stone pier would maintain the operation of these assets as well as slipway access.
- 4.2.135 No critical infrastructure features were identified in this PDZ.

Population and Community

- 4.2.136 Of the 4 features/properties identified within this PDZ, the major impact of the preferred management policy of MR along (PU 9.11) will be associated with properties of the caravan park at Clarach Bay in which the northern end of the bay would be lost as part of the realignment. Mitigation such as provision of space for relocation of properties may be required.
- 4.2.137 No key community, recreational and amenity facilities were identified in this PDZ.
- 4.2.138 No significant impacts to key industrial, commercial, economic and tourism assets and activities assets are anticipated in this PDZ.

PDZ 10 Upper Borth to Tonfanau

Biodiversity, Flora and Fauna

- 4.2.139 For the open coastline within this PDZ, HTL is proposed at PUs 10.2, 10.3, 10.16, 10.17, and 10.19, which are intended to protect transport infrastructure and large settlements. The HTL policies could result in a constraint to the natural development of intertidal sandflat as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of intertidal sandflat feature. The policy for the southern and eastern Dyfi estuary is aimed at the protection of the railway line until adaptation and realignment of the railway can be undertaken. The HTL policy for the northern estuary is to maintain the large settlements or other transport infrastructure. These policies could result in a constraint to the natural development of intertidal sandflat and saltmarsh as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of intertidal sandflat and saltmarsh, and subsequently the estuary features within the Lleyn Peninsula and the Sarnau SAC. The reduction in intertidal habitats (an SAC qualifying feature) could be significant in epochs 2 and 3. However, MR policies proposed in epoch 3 will counteract much of the losses, though a commensurate alteration of grazing marsh/grassland will be affected by tidal inundation in the long. The intertidal habitat lost within the SAC during epochs 1 and 2 also



provides supporting habitat for the Dyfi Estuary SPA interest species. Consequently, an adverse effect on the integrity of the Lleyn Peninsula and the Sarnau SAC and the Dyfi Estuary SPA (as well as reduction in achievement of the criterion of the Dyfi Estuary Ramsar) is expected. Scheme level mitigation measures may be appropriate in order to minimise the extent of potential habitat loss in local areas, but not likely for the wider estuary. The IROPI case will need to be made for these policies and compensatory habitat created where appropriate.

- 4.2.140 The main threat to the active raised bog feature within the Cors Fochno SAC in the short-medium term would be sudden, uncontrolled inundation generating high flow rates and leading to deeply incised erosion channels. The issue of damage to Cors Fochno SAC and its priority features were central to the policy developed for this area. Reducing drainage in epochs 1 and 2 prior to MR and controlling inundation would ensure that the periphery of the bog is not affected. Consequently, no adverse effect is expected on the Cors Fochno SAC or the criterion for the Dyfi Estuary Ramsar for this area.
- 4.2.141 Similar to the Natura 2000 Sites of this PDZ, there is potential for the habitat interest features associated with the SSSIs such as sandflats and saltmarsh to be restricted in their natural development. This will occur for the Dyfi SSSI along PUs 10.3, 10.4, 10.5, 10.6, 10.7, 10.11, 10.12, 10.13, 10.14, 10.17, and 10.18 for HTL mainly during epochs 1 and 2. However, MR policy in the third epoch along some sections could create additional habitat (fen, marsh) over the long term and reduce the scale of the potential impacts over the first and second epochs. For those impacts associated with HTL (i.e. potential loss of intertidal habitat due to sea level rise / coastal squeeze), the mitigation measures for habitat loss are likely to overlap with the compensatory habitat requirements for the Natura 2000 Sites, though some additional habitat creation may be necessary for terrestrial habitats.
- 4.2.142 The HTL policies in PUs 10.2 (Borth Village) in epoch 2, 10.6 (Cors Fochno) and 10.7 (Dyfi Junction) in epochs 1 and 2, 10.11 (Gogarth) and 10.12 (Dyfi North) for all epochs, 10.13 (Aberdyfi) for epoch 3 and finally 10.16 (Tywyn) for epochs 2 and 3 could result in the significant reduction of intertidal habitats (including mudflats, sandflats and saltmarsh) as a result of sea level rise. The total losses for all epochs could extend up to the following; mudflat 40.5ha, sandflat 54.4ha and saltmarsh 89.7ha. The majority of the potential losses occur in epoch 2 for saltmarsh and epochs 2 and 3 for mudflat and sandflat.
- 4.2.143 The MR policies in PUs 10.1 (Upper Borth), 10.2, 10.5, 10.6, 10.7, 10.10 (Pennal valley), 10.14 (Aberdyfi Dunes), 10.18, and 10.19 (Tonfanau) could result in the loss of terrestrial BAP habitat including; coastal and floodplain grazing marsh, broadleaved mixed Yew woodland and fen, marsh and swamp. The mitigation for the loss of broadleaved mixed Yew woodland and fen, marsh and swamp would be habitat creation subject to the MR policy details.
- 4.2.144 MR policies are likely to result in the creation of additional littoral sediment BAP habitat.

Geology and Geomorphology

- 4.2.145 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.146 No impact on Heritage Coast, and a minor positive impact on National Park for PUs 10.10, 10.14, 10.15, 10.18, and 10.19.

Historic Environment

- 4.2.147 Out of 17 identified designated heritage features within this PDZ, several features are likely to be affected by erosion or disturbance as a result of MR policy (epoch 3) within PUs 10.2 and 10.6. These include:

- Angorfa, Morfan and Sabrina Cottages (PU 10.2);
- Dwellings (Listed Buildings) at Dyfi Valley (PU 10.6);
- Military Listed Buildings at Dyfi Valley (PU 10.6); and
- Domen Las at Dyfi Valley (PU 10.6).

- 4.2.148 However, the following sites will be positively protected by the preferred management policy of HTL (epoch 2 and 3):

- Listed Buildings at Aberdyfi (PU 10.13).

- 4.2.149 Within this PDZ, two undesignated archaeological features found in PUs 10.1 and 10.15 have the potential to be lost or damaged through the policy of NAI or MR. However, more than 18 archaeological features will continue to be protected under HTL/MR for several policy units. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

- 4.2.150 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

- 4.2.151 The policy of MR in epoch 3 in PU 10.2 at Borth may require the adaptation of the lifeguard and lifeboat station in order to maintain its operation and function. Of the nine features identified within PDZ 10, five will be significantly impacted:

- Coastal road at Borth (PU 10.1);
- Railway line at Aberdyif (PU 10.11 & 10.12);
- Railway line at Tywyn (PU 10.16);
- Bridge and embankments at Dysynni (PU 10.18); and
- Railway line and footpath at Rhoslefain (PU 10.19).

- 4.2.152 Alternative route configuration may be available to mitigate negative impacts to the coastal road at Borth.

Population and Community

- 4.2.153 Of the 6 features/properties identified within this PDZ, the major impact of the preferred management policy of MR along (PU 10.2) will be associated with coastal properties of Borth. Mitigation such as early warning systems for flooding and relocation of properties may be required. However, the policies of HTL and HTL/MR along PUs 10.12 and 10.15 will provide protection of residences and properties and settlements.
- 4.2.154 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ other than the positive impact of the MR policies to Aberdyfi Golf Course in PU 10.14.
- 4.2.155 No significant impacts to assets are anticipated in this PDZ, however the policy of HTL (epoch 2 and 3) will have a positive impact on the Caravan Park Site at Tywyn along PU 10.15 (i.e. continued protection).

PDZ 11 Tonfanau to Mochras

Biodiversity, Flora and Fauna

- 4.2.156 For the open coast, HTL is proposed for all epochs in PUs 11.1, 11.3, and for epoch 1 for PU 11.4 intended to protect transport infrastructure (rail and road) and large settlements. This could result in a constraint to the natural development of intertidal sandflat as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of intertidal sandflat feature. However, there is no measurable decrease in habitat extent in epoch 1, and therefore intertidal sandflat feature would only be lost within PUs 11.1 and 11.3 in epochs 2 and 3. Within the Mawddach Estuary, HTL for all epochs at PUs 11.7, 11.8, and 11.11 (Penmaenpool) could result in a loss of intertidal sandflat habitat within the estuary due to coastal squeeze as the defences are maintained, as a result of the intent of protecting transport infrastructure (rail and road). Consequently, an adverse effect on the integrity of the Lleyn Peninsula and the Sarnau SAC is expected due to the lack of achievement of the conservation objectives for the intertidal sandflat an estuary features in the Site. Scheme level mitigation measures may be appropriate in order to minimise the extent of potential habitat loss in local areas. The IROPI case will need to be made for these policies and compensatory habitat created where appropriate.
- 4.2.157 The MR policy in epochs 2 and 3 for PU 11.13 could potentially result in the loss of heathland or woodland habitat that would affect the Meirionnydd Oakwoods and Bat Sites SAC; however, this is avoided by ensuring that MR does not result in disturbance to the SAC habitat during detailed design. This mitigation can be successfully implemented and avoid the conclusion of an adverse effect.
- 4.2.158 Similar to the Natura 2000 Sites of this PDZ, there is potential for the habitat interest features associated with the SSSIs such as sandflats and saltmarsh to be restricted in their natural development. This will occur for Aber Mawddach / Manddach Estuary SSSI for PUs 11.4, 11.6, 11.8, 11.9, 11.11, 11.12, and 11.14 for HTL mainly during all epochs. However, MR policy in the second and third epochs along some sections could create additional habitat (fen, marsh) over the long term and reduce the scale of the potential impacts over the first epoch. For those impacts associated with HTL (i.e. potential loss



of intertidal habitat due to sea level rise / coastal squeeze), the mitigation measures for habitat loss are likely to overlap with the compensatory habitat requirements for the Natura 2000 Sites, though some additional habitat creation may be necessary for terrestrial habitats. There is also potential for loss of geological exposure and damage to the geological component of the Glannau Tonfanau I Friog SSSI.

- 4.2.159 The HTL policies in PUs 11.6 (Fairbourne Embankment), 11.9 (Fegla) and 11.12 (Upper estuary) in epoch 1, and PU 11.14 Barmouth South) could result in a reduction of mudflat, sandflat and saltmarsh BAP habitat as a result of sea level rise, which could restrict beach width. The total potential losses for all epochs could be up to the following amounts: mudflat 2.1ha, sandflat 31.8ha, and saltmarsh 6.1ha. The majority of the losses of saltmarsh occur in epoch 1, with the main losses for sandflat in epoch 3.
- 4.2.160 The MR policies for PUs 11.2 (Llwyngwriil), 11.4 (Ro Wen coast), 11.6, 11.9, 11.10 (Mawddach south bank), 11.12, 11.13 (Mawddach north), 11.15 (Barmouth North), 11.17 (Egryn Marsh), and 11.18 (Sunnysands) could result in the loss of terrestrial BAP habitat including; fen, marsh and swamp, coastal and floodplain grazing marsh, broadleaved mixed Yew woodland and coniferous woodland. The mitigation for the loss of fen, marsh and swamp and broadleaved mixed Yew woodland would be habitat creation subject to the MR policy details.
- 4.2.161 The MR policies are likely to result in the creation of additional littoral sediment BAP habitat especially in PUs 11.10, 11.13, 11.9 and 11.12.

Geology and Geomorphology

- 4.2.162 There is a potential reduction in the rate of exposure associated with the geological interest component of Glannau Tonfanau I Friog SSSI. This will result in a major negative impact.

Landscape

- 4.2.163 A potential moderate negative impact could arise on character of the National Park in PUs 11.1 and 11.3 these could be reduced through sensitive and appropriate design at the scheme level. A minor positive impact could arise elsewhere in the National Park due to the various MR policies; however, these could also result in erosion and loss of Historic Landscape Area, subsequently resulting in a minor negative impact.

Historic Environment

- 4.2.164 Out of seven identified designated heritage features, the only feature to be potentially impacted upon within this PDZ through damage or disturbance as a result of HTL policy (epoch 2 and 3) is the Anti Invasion Defences (SM) at Fairbourne (PU 11.4). This will occur as the site is seaward of defences, and through SLR and erosion it is likely that the majority of this site will be lost in the last epoch. Monitoring or localised management of shoreline retreat may reduce the potential damage or loss of this heritage feature depending upon the impacts of this type of management to other environmental designations.
- 4.2.165 Within this PDZ, two undesignated archaeological features found in PUs 11.4 and 11.18 have the potential to be lost or damaged through the policy of NAI or MR. However, several archaeological features will continue to be protected under HTL for several

policy units. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

Material Assets

- 4.2.166 The MR and NAI policies in epochs 2 and 3 within PUs 11.4 (Fairbourne) and 11.9 (Afon Mawddach) may result in the loss of slipway use and access.
- 4.2.167 The HTL policies for all epochs in PU 11.14 at Barmouth would maintain the operation of the harbour and lifeboat station especially in epochs 2 and 3.
- 4.2.168 Of the nine features identified within PDZ 11, six will be significantly impacted:
- Promenade, coastal road and car parks at Barmouth (PU 11.14);
 - Railway line at Barmouth (PU 11.15);
 - Railway line at Gwastaddgoed (PU 11.3);
 - Railway line and frontage at Ro Wen (PU 11.4);
 - Coastal road at Fairbourne (PU 11.4); and
 - Viaduct and embankment at Barmouth Bridge (PU 11.8).
- 4.2.169 At Barmouth, alternative routes already exist and future redevelopment of the seafront could be used to mitigate negative impacts. It may be possible to mitigate negative impacts to the railway at Ro Wen through realignment of the line inland.

Population and Community

- 4.2.170 Of the seven features/properties identified within this PDZ, the major impact of the preferred management policies of NAI and HTL/MR will be associated with following:
- Properties at Fairbourne (PU 11.4) which will potentially be lost under NAI. Mitigation such as provision of alternative housing / space for development of properties may be required.
- 4.2.171 Although the overall policy for the frontage at Llwyngwriil is MR, the properties at risk on the A493 will remain protected in response to the railway being protected.
- 4.2.172 The only significant impacts identified in this PDZ were to the footpath at Ro Wen which would deteriorate and eventually be lost through epochs 2 and 3 as a result of the MR and NAI policies. It may be possible to mitigate impacts to the footpath at Ro Wen through realignment of the line inland.
- 4.2.173 No significant impacts to assets are anticipated in this PDZ; however, the policy of HTL (epoch 2 and 3) will have a positive impact on the Royal Air Base at Llanbedr along PU 11.2 (i.e. continued protection).

PDZ 12 Mochras to Pen ychain

Biodiversity, Flora and Fauna

- 4.2.174 The Glaslyn / Dwyrdd and Arthro Estuaries within the Lleyn Peninsula and the Sarnau SAC have a variety of policy options within the PUs with the majority being NAI over all epochs which will allow the estuary to respond naturally to sea level rise. HTL policies for all epochs at PU 12.8, 12.13, and 12.14, and epoch 1 at PU 12.9 within the Glaslyn / Dwyrdd Estuary, and all epochs at PU 12.4 within the Arthro Estuary could result in a constraint to the natural development of intertidal sandflat and saltmarsh as a result of sea level rise, and result in a reduction in the extent of intertidal sandflat and saltmarsh, and subsequently estuary, features within the Lleyn Peninsula and the Sarnau SAC. The northwest coastline of this PDZ comprises several units where HTL is proposed including PUs 12.17, 12.18, 12.20, and 12.24, which could result in constraint to the natural development of intertidal sandflat as a result of sea level rise, restricting beach width and therefore result in a reduction in the extent of intertidal sandflat feature for some areas of the SAC within these units. Consequently, an adverse effect on the integrity of the Lleyn Peninsula and the Sarnau SAC is expected. Scheme level mitigation measures may be appropriate in order to minimise the extent of potential habitat loss in local areas. The IROPI case will need to be made for these policies and compensatory habitat created where appropriate.
- 4.2.175 Similar to the Natura 2000 sites of this PDZ, there is potential for the habitat interest features associated with the SSSIs such as sandflats and saltmarsh to be restricted in their natural development. This will occur for Morfa Dyffryn SSSI, Morfa Harlech SSSI for PUs 12.2, 12.3, 12.4, 12.6, 12.8, 12.9, 12.13, and 12.14 for HTL for the majority of all epochs. The policy of MR along some sections could create additional habitat (e.g. intertidal) over the long term and reduce the scale of the potential impacts over the first epoch. For those impacts associated with HTL (i.e. potential loss of intertidal habitat due to sea level rise / coastal squeeze), the mitigation measures for habitat loss are likely to overlap with the compensatory habitat requirements for the Natura 2000 Sites, though some additional habitat creation may be necessary for terrestrial habitats.
- 4.2.176 The HTL policies in PUs 12.2 (Arthro Southern Spit), 12.3 (Arthro Estuary south), 12.4 (Arthro Estuary East), 12.6 (Llandanwg Headland), 12.8 (Harlech Valley), 12.9 (Talsarnau), 12.13 (The Cob and Porthmadog), and 12.14 (Borth-y-Gest) could result in constraint to the natural development of intertidal habitat/zone as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of sandflat, mudflat and saltmarsh BAP habitat. The total potential losses for all epochs could be up to the following amounts: mudflat 3.9ha, sandflat 27.0ha, and saltmarsh 20.8ha. The majority of the losses occur in epoch 3. Where the policy is HTL in the above PUs in epoch 1 the policies of MR in the remaining epochs would result in the creation of additional intertidal habitat. Furthermore, all of the other MR policies are likely to result in the creation of additional littoral sediment BAP habitat.
- 4.2.177 The MR policies occur in epochs 2 and 3 in PUs 12.3 (Arthro Estuary south), 12.5 (Llandanwg Dunes), 12.9, 12.17, and 12.24 (Afon Wen) could result in the loss of terrestrial BAP habitat of fen, marsh and swamp and coastal and floodplain grazing marsh. The mitigation for the loss of fen, marsh and swamp would be habitat creation subject to the MR policy details.

Geology and Geomorphology

- 4.2.178 HTL during the second epoch along PU 12.18 may result in the loss of a limited frontage along this site which is generally not exposed due to the set back nature and elevated beach levels. This will result in a moderate negative impact for the Tiroedd A Glannau Rhwing Cricieth Ac Afon Glaslyn SSSI.

Landscape

- 4.2.179 A potential moderate negative impact could arise on character of the National Park in PU 12.6, which could be reduced through sensitive and appropriate design at the scheme level. A minor positive impact could arise elsewhere in the National Park due to the various MR policies; however, these could also result in erosion and loss of Historic Landscape Area, subsequently resulting in a minor negative impact.

Historic Environment

- 4.2.180 Out of 10 identified designated heritage features, the features likely to be affected by erosion as a result of NAI or MR policy are St Tanwg Church (Listed Building) (PU 12.5); Pont Briwet (Listed Building) (PU 12.10); and the Observatory Tower (Listed Building (PU 12.18). Monitoring or localised management of shoreline retreat may reduce the potential damage or loss of this heritage feature depending upon the impacts of this type of management to other environmental designations.
- 4.2.181 However, the following sites will be protected by the preferred management policy of HTL (mainly epochs 2 and 3):
- Listed Buildings at Porthmadog (PU 12.13); and
 - Listed Building, Morannedd Café at Criccieth (PU 12.19).
- 4.2.182 Within this PDZ, three undesigned archaeological features found in PU 12.5 have the potential to be lost or damaged through the policy of MR. However, several archaeological features will continue to be protected under HTL for several policy units. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

Material Assets

- 4.2.183 Within this PDZ the MR policies in PU 12.2 at Llandanwg and Shell Island for epochs 2 and 3 are likely to limit the use and access to the harbour and sailing club as access would be lost especially in epoch 3. Mitigation would require the relocation of the sailing club or alternative access routes.
- 4.2.184 The HTL policy for all epochs in PU 12.13 would protect and maintain the operation of Porthmadog harbour and marina.
- 4.2.185 The MR policy in PU 12.18 for epoch 3 would result in the loss of the road and slipway which would require realignment in order to maintain operation.

4.2.186 Of the 14 features identified within PDZ 12, eight will be significantly impacted:

- Road and railway line at Portmerion (PU 12.12);
- Railway station at Porthmadog (PU 12.13);
- Railway line at Criccieth (PU 12.17);
- Railway line Penychain to Criccieth (PU 12.22);
- Pensarn Bridge at Afon Artro (PU 12.3);
- Railway line at Llandanwg (PU 12.6);
- Railway line at Harlech (PU 12.6); and
- Railway line at Afon Dwryd (PU 12.9).

4.2.187 The major negative impacts at Criccieth and Penychain to Criccieth may be mitigated by realignment of the railway.

Population and Community

4.2.188 No significant impacts to assets are anticipated in this PDZ, while the properties under HTL along Borth y gest will remain protected.

4.2.189 The only significant impacts identified in this PDZ were to the footpath at Afon Dwryd which would deteriorate and eventually be lost through epochs 2 and 3 as a result of NAI policies and regular flooding. It may be possible to mitigate impacts to the footpath through realignment of the line inland.

4.2.190 For the camp site on Shell Island (PU 12.1) there is likely to be some plots that may be affected by flooding and erosion associated with the policy of NAI/MR (epochs 2 and 3). Relocation of plots may be required as mitigation.

PDZ 13 Pen ychain to Trwyn Cilan

Biodiversity, Flora and Fauna

4.2.191 HTL in PU 13.6 for all epochs and PUs 13.7 and 13.8, in epoch 1 only, could result in constraint to the natural development of intertidal sandflat as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of intertidal sandflat feature in localised areas, as the other PUs within this PDZ fall outside the SAC boundary. However, an adverse effect on the integrity of the Lleyn Peninsula and the Sarnau SAC is expected as a result of policy for PUs 13.6, 13.7, and 13.8, with total loss of up to 2.19ha of intertidal sandflat feature being affected by epoch 3. Scheme level mitigation measures may be appropriate in order to minimise the extent of potential habitat loss in local areas. The IROPI case will need to be made for these policies and compensatory habitat created where appropriate.

4.2.192 The Mynydd Tir Y Cwmwd A`R Glannau At Garreg Yr Imbill SSSI associated with PU 13.6 will also be impacted upon by the preferred policy of HTL which could result in a reduction in the extent of intertidal habitat in localised areas. The mitigation measures for habitat loss are likely to overlap with the compensatory habitat requirements for the Natura 2000 Sites, though some additional habitat creation may be necessary for terrestrial habitats.

- 4.2.193 The HTL policies in epoch 1 in PUs 13.3 (Glan Y Don), 13.4 (Pwllheli Harbour and entrance), 13.5 (Pwllheli Centre), and 13.15 (Machroes) could potentially result in minor insignificant losses of sandflat and mudflat BAP habitat as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of littoral sediment BAP habitat. The only significant losses occur in epochs 2 and 3 for PUs 13.3, 13.4, and 13.5. The total potential losses for all epochs could be up to the following amounts: mudflat 6.5ha, and sandflat (7.6ha). The majority of the losses occur in epoch 3.
- 4.2.194 The HTL policies for all epochs in PUs 13.3 (Glan Y Don), 13.4 (Pwllheli Harbour and entrance), 13.5 (Pwllheli Centre), and for the first epoch in PU 13.15 (Machroes) could result in constraint to the natural development of intertidal habitat, albeit limited in extent.
- 4.2.195 The MR policies in epochs 2 and 3 of PUs 13.2 (Abererch), 13.7 (Golf Course), 13.8 (Traeth Crugan) and in epoch 2 of PU 13.14 could result in the loss of terrestrial BAP habitat including of fens swamp marsh and coastal and floodplain grazing marsh. The mitigation for the loss of fen, marsh and swamp would be habitat creation subject to the MR policy details.
- 4.2.196 MR policies are likely to result in the creation of additional littoral sediment BAP habitat.

Geology and Geomorphology

- 4.2.197 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.198 A potential minor positive impact could arise on character of the Llyn AONB in PU 13.13, however, due to the various MR policies these could also result in erosion and loss of Historic Landscape Area, subsequently resulting in a minor negative impact.

Historic Environment

- 4.2.199 Out of 5 identified designated heritage features, the only features likely to be affected by erosion or disturbance as a result of NAI (all epochs) and MR (last epoch) policy is Pared Mawr Camp (SM) at Porth Ceiriad (PU 13.18) and the Listed Building at Tan y Bwlch (PU 13.7). Monitoring or localised management of shoreline retreat may reduce the potential damage or loss of this heritage feature depending upon the impacts of this type of management to other environmental designations.
- 4.2.200 However, the following site will be protected by the preferred management policy of HTL (epoch 3):
- Listed Buildings at Pwllheli (PU 13.4).
- 4.2.201 Within this PDZ, two undesignated archaeological features found in PUs 13.8 and 13.9 have the potential to be lost or damaged through the policy of NAI. However, one archaeological feature will continue to be protected under HTL for PU 13.4. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

Material Assets

- 4.2.202 The HTL policy in PU 13.4 for all epochs would maintain the operation of Pwllheli harbour.
- 4.2.203 No significant impacts are anticipated in this PDZ to critical infrastructure.

Population and Community

- 4.2.204 No significant impacts to properties are anticipated in this PDZ.
- 4.2.205 The only significant impacts identified in this PDZ were to the footpath at Treath Crugan which would be lost as the new mouth for the Afon Penrhos is created in epochs 2 and 3 as a result of MR policies. It may be possible to mitigate impacts to the footpath through realignment of the line inland.
- 4.2.206 No significant impacts to assets are anticipated in this PDZ; however the policies of HTL and MR will have positive impacts on the holiday parks at Abererch, Abersoch to Llanbedrog, and Pwllheli (i.e. continued and controlled protection).

PDZ 14 Trwyn Cilan to Carreg Du

Biodiversity, Flora and Fauna

- 4.2.207 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.208 Within this PDZ, no direct or indirect effects on the interest features for the various SSSIs as a result of coastal management policy are expected.
- 4.2.209 Large parts of the coastline within PDZ 14 are NAI for all three epochs. Where HTL and MR policies are present, BAP habitats are not likely to be affected with the exception of possible loss of up to 0.1ha in epoch 1.

Geology and Geomorphology

- 4.2.210 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.211 A minor positive impact is predicted for the Llyn AONB and the Historic Landscape Area due to the retention and development of natural features due to the various policies, as well as protection of the settlement and its associated built and historic character in PU 14.8.

Historic Environment

- 4.2.212 For the two key designated heritage features within this PDZ, the Listed Buildings and Historic Park to the west of Porth Neigwl (PU 14.5) are likely to be affected by erosion as a result of NAI policy. Monitoring or localised management of shoreline retreat may reduce the potential damage or loss of this heritage feature depending upon the impacts of this type of management to other environmental designations.

4.2.213 However, the following site will be protected by the preferred management policy of HTL (epoch 2 and 3):

- Listed Buildings at Aberdaron (PU 14.8).

4.2.214 Within this PDZ, three undesignated archaeological features found in PUs 14.1, 14.6, and 14.9 have the potential to be lost or damaged through the policy of NAI. However, ten archaeological features will continue to be protected under HTL for PU 14.8. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

Material Assets

4.2.215 No significant impacts are anticipated to affect marine operations in this PDZ although the NAI policy may result in the loss of the slipway at Porth Meudwy (PU 14. 9) in epoch 3 although this is uncertain.

4.2.216 Critical infrastructure features to be potentially impacted upon by erosion associated with the policy of NAI for all three epochs include a telephone exchange in PU 14.7.

Population and Community

4.2.217 No significant impacts to assets are anticipated in this PDZ, while the new realigned configuration of the shoreline at Aberdaron under HTL in the last epoch would include defence to the core of the village.

4.2.218 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.

4.2.219 No key industrial, commercial, economic and tourism assets and activities assets were identified in this PDZ.

PDZ 15 Carreg Ddu to Trwyn y Tal

Biodiversity, Flora and Fauna

4.2.220 No impacts are identified for SPA or SAC within this PDZ.

4.2.221 Within this PDZ, no direct or indirect effects on the interest features for the various SSSIs a result of coastal management policy are expected.

4.2.222 The HTL policies for all epochs in PU 15.3 (Porth Nefyn West) could result in constraint to the natural development of intertidal habitat as a result of sea level rise, which could restrict beach width and result in a reduction in the extent of sandflat BAP habitat particularly in epoch 2. However the subsequent MR policy in epoch 3 and MR policies in other PUs such as 15.5 are likely to result in the additional creation of intertidal BAP habitat. Within the PDZ as a whole, a total potential loss of up to 0.1ha of intertidal mudflat and 0.6ha of intertidal sandflat could arise in epochs 1 and 2.



- 4.2.223 The MR policies for all epochs in PUs 15.5 (Trefor) and 15.6 (Aberdesach) and epochs 2 and 3 in PU 15.2, and epoch 3 in PU 15.3 could result in the loss of terrestrial BAP habitat including of broadleaved mixed Yew woodland and coastal and floodplain grazing marsh. The mitigation for the loss of broadleaved mixed Yew woodland would be habitat creation subject to the MR policy details.

Geology and Geomorphology

- 4.2.224 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.225 A moderate negative impact is anticipated in epoch 3 in PU 15.2 (Porth Dinllaen) affecting the built and historic environment character of the Llyn AONB, the Historic Landscape Area, and the Heritage Coast.

Historic Environment

- 4.2.226 Out of 8 identified designated heritage features within this PDZ, five features are likely to be affected by erosion as a result of NAI or MR policies. These include:

- Listed Buildings - Penyborth and Hendafarn (PU 15.1);
- Lime Kiln (PU 15.1);
- Disused quarry at Porth Y Nant (PU 15.1);
- 'White Hall' (Listed Building) (PU 15.2); and
- Landscape of Outstanding Historic Interest (PU 15.1 - 15.5).

- 4.2.227 Within this PDZ, four undesignated archaeological features found in PUs 15.1, 15.2, and 15.4 have the potential to be lost or damaged through the policy of NAI. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

- 4.2.228 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

- 4.2.229 Marine access and operations are not anticipated to be significantly affected by SMP policy in this PDZ.

- 4.2.230 No critical infrastructure features were identified in this PDZ.

Population and Community

- 4.2.231 No significant impacts to properties are anticipated in this PDZ.



- 4.2.232 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.
- 4.2.233 No significant impacts to key industrial, commercial, economic and tourism assets and activities assets are anticipated in this PDZ.

PDZ 16 Trwyn Dylan to Llanfairfechan

Biodiversity, Flora and Fauna

- 4.2.234 The HTL policy in the Cefni Estuary (PU 16.9; embankment and village) will potentially result in loss of intertidal habitat through coastal squeeze, resulting in a potential reduction in the extent of intertidal mudflat (and subsequently the estuary feature) within the Anglesey Coast: Saltmarsh SAC. Within the Menai Strait and Conwy Bay SAC, HTL policy for PUs 16.5; 16.11, and 16.33 could result in the reduction in intertidal sandflat as the intertidal habitats are squeezed as a result of sea level rise and the constraint due to HTL policy. Loss from PU 16.5 would only occur in epoch 1, followed by MR in the 2nd or 3rd epochs. Intertidal reef features may also be affected by the constraint induced by HTL policies. HTL has been selected at these units in order to protect transport infrastructure (road) or national defence infrastructure, though only in the medium term, with the intent to realign these assets away from the coast. An area of the Menai Straits SAC is also designated as part of the Lavan Sands Conwy Bay SPA, and subsequently the loss of supporting intertidal sandflat could affect the SPA interest species populations. Consequently, an adverse effect on the integrity of the Anglesey Coast: Saltmarsh SAC, Menai Strait and Conwy Bay SAC, and Lavan Sands Conwy Bay SPA is expected. Scheme level mitigation measures may be appropriate in order to minimise the extent of potential habitat loss in local areas. The IROPI case will need to be made for these policies and compensatory habitat created where appropriate.
- 4.2.235 Similar to the Natura 2000 Sites of this PDZ, there is potential for the habitat interest features associated with the SSSIs such as sandflats and mudflats to be restricted in their natural development. This will occur for Y Foryd SSSI, Malltraeth Marsh/Cors Ddyga SSSI, Afon Gwyfai Ai A Llyn Cwellyn SSSI, Glannau Porthaethwy SSSI, Glannau Penmon-Biwmares SSSI, Traeth Lafan SSSI, and Baron Hill Park SSSI along PUs 16.5, 16.9, 16.11, 16.19, 16.22, 16.24, 16.29, and 16.33. For HTL along these policy units, this will result in potential loss of habitats due to coastal squeeze. The mitigation measures for habitat loss are likely to overlap with the compensatory habitat requirements for the Natura 2000 Sites, though some additional habitat creation may be necessary for terrestrial habitats.
- 4.2.236 The HTL policies in PUs 16.5 (Foryd Bay), 16.9 (Embankment and village), 16.11 (Ffordd Yr Aber to Afon Carogg), 16.12 (Caernarfon), and 16.19 (Porthaethwy) could result in constraint to the natural development of intertidal habitat as a result of sea level rise, which could restrict beach width and result in a significant reduction in the extent of BAP habitat including mudflat, sandflat and saltmarsh. The total potential losses for all epochs could be up to the following amounts: mudflat 29.9ha, sandflat 14.6ha, and saltmarsh 5.0ha. The majority of the losses occur in epoch 3 for mudflat and saltmarsh, and epoch 2 for sandflat.

4.2.237 The MR policies in PUs 16.5, 16.11, 16.21, 16.32 (Afon Aber), and 16.33 (Llanfairfechan) could result in the loss of terrestrial BAP habitat including; coastal and floodplain grazing marsh, broadleaved mixed Yew woodland and fen, marsh and swamp. A small proportion of fen, marsh and swamp could be lost in PU 16.5 in epoch 2, with small losses of broadleaved mixed Yew woodland in epochs 1 and 2 in PU 16.32 and epoch 3 in PUs 16.33 and 16.21. The mitigation for the loss of broadleaved mixed Yew woodland and fen, marsh and swamp would be habitat creation subject to the MR policy details.

4.2.238 MR policies for PUs 16.5, 16.32, and 16.33 are likely to result in the creation of additional littoral sediment BAP habitat.

Geology and Geomorphology

4.2.239 No impact on geological designations is anticipated for this PDZ.

Landscape

4.2.240 No impact is expected on the Heritage Coast or Historic Landscape Area. However, a moderate negative impact could arise as a result of the loss of built landscape features; however, this would be balanced with the moderate positive impact resulting from the improvement in natural environment landscape features. A moderate negative impact could arise on the significant viewpoint at Caernarfon Castle; however, this could be reduced to negligible through sensitive and appropriate design at the scheme level.

Historic Environment

4.2.241 Out of 37 identified heritage features within this PDZ, twelve features are likely to be affected by erosion as a result of NAI policy (all epochs). These include:

- Tywyn y Parc Promontory Fort (SM) at Cwningar Bodowen (PU 16.1);
- Promontory Fort 'Dinas Camp' (SM) at Port Dinorwig (16.3);
- Yr Unicorn (Listed Building) at Menai Straits (PU 16.6);
- Well preserved late 16th century walled and terraced garden including some listed structures (Listed Buildings) at Vaynol Park (PU 16.15);
- Statue, and coastal properties (Listed Buildings) at Llanfair Pwllgwyngyll (PU 16.16);
- Bridge over stream near Melin Pwll-fanogl (Listed Building) (PU 16.16);
- Milestone by Gallows Point (Listed Building) (PU 16.20);
- Historic gardens, castle and Listed Buildings at Beaumaris (PU 16.21);
- Garth Jetty (Listed Building) (PU 16.25);
- Low lying Listed Buildings and 'Pier Camp' at Bangor (PU 16.26);
- Historic Park Penrhyn Castle Listed Building) (PU 16.29); and
- Bridge at the mouth of the Afon Ogwen Listed Building) (PU 16.31).

4.2.242 However, the following sites will be protected by the preferred management policy of HTL (epoch 2 and 3):

- Listed Buildings, Essential Settings, Castle and Town Walls (PU 16.12);
- Yfelinheli Listed Building at Y Felinheli (PU 16.14);
- Several Listed Buildings at Menai Bridge Town (PU 16.19);
- Site of Friary (SM) at Llanfaes (PU 16.25);
- Historic Park Penrhyn Castle (Listed Building) at Porth Penrhyn (PU 16.29); and
- Listed Building at Fort Beland and dock (including dockside buildings) at Fort Belan (PU 16.4).

4.2.243 Within this PDZ, eight undesigned archaeological features found in PUs 16.15, 16.16, 16.25, and 16.31 have the potential to be lost or damaged through the policy of NAI. However, more than 20 archaeological features will continue to be protected under HTL for several policy units. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

4.2.244 Mitigation associated with the impacted features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

4.2.245 The HTL policies for all epochs in PU 16.12, PU 16.14 and PU 16.29 would maintain the operation of Caernarfon, Yfelinhel and Port Penrhyn harbour, marine and docks especially in epochs 2 and 3.

4.2.246 Of the six features identified within PDZ 16, three will be significantly impacted:

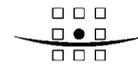
- Coastal road at Menai Straits (PU 16.11);
- Penmon Coastal road at Menai Straits (PU 16.25); and
- Railway line at Llanfairfechan (PU 16.31).

4.2.247 Mitigation of the negative impacts to the roads will be available through realignment.

Population and Community

4.2.248 Of the six features/properties identified within this PDZ, the major impact of the preferred management policy of MR along (PU 16.33) for the last epoch will be associated with properties at Llanfairfechan in which some properties may be lost due to the realignment. Mitigation such as Provision of alternative land for property development or relocation may be required.

4.2.249 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ apart from the HTL/NAI policy maintaining public rights of way along the Caernarfon footpath and cycle track.



- 4.2.250 The Trout Farm and ponds at Pontllyfni (PU 16.1) may be impacted upon by increased erosion associated with NAI, in particular those ponds closest to the beach and the fish farm is at risk from flooding on normal spring tides. Mitigation such as relocation of fish farm or private defence works may be required.
- 4.2.251 For Caernarfon Airfield (PU 16.4), its function is likely to be affected in this epoch due to SLR making defences unsustainable associated with policy of MR/NAI. Mitigation such as relocation of airfield may be required.

PDZ 17 Teyn y Parc to Twyn Cliperau

Biodiversity, Flora and Fauna

- 4.2.252 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.253 Overall there will very little impact to the various SSSIs associated with this PDZ; there could be some loss of intertidal habitat in front of the defences along PU 17.20 associated with Beddmanarch-Cymyan SSSI. Mitigation may include habitat creation.
- 4.2.254 The only potentially significant losses of sandflat, mudflat and saltmarsh BAP habitat as a result of HTL policy occurs in PUs 17.7 (Crigyll valley south) and 17.18 (Stanley Embankment) where policy could result in constraint to the natural development of intertidal habitat as a result of sea level rise. There are also some insignificant losses in PUs 17.11 (Porth Diana), 17.15 (Holyhead), 17.18 and 17.20 (Valley). The total potential losses for all epochs could be up to the following amounts: mudflat 2.3ha, sandflat 7.7ha, and saltmarsh 0.4ha. The majority of the losses for sandflat and mudflat occur in epoch 3.
- 4.2.255 The MR policies for all epochs in PUs 17.9 (General policy for Southwest), 17.19 (General policy for Inland Sea), 17.21 (Newlands), 17.22 (Afon Alaw), and 17.23 (Traeth Gribin to Twyn Cliperau), and epochs 1 and 2 for PU 17.10 (Borthwen) could result in the loss of terrestrial BAP habitat including; bracken, broadleaved mixed Yew woodland, coniferous woodland, coastal and floodplain grazing marsh, fen, marsh and swamp and dwarf shrub heath. The mitigation for the loss of bracken, broadleaved mixed Yew woodland, fen, marsh and swamp and dwarf shrub heath would be habitat creation subject to the MR policy details. These MR policies and especially those for all epochs in PUs 17.19 and 17.22 are likely to result in the creation of additional intertidal habitat.

Geology and Geomorphology

- 4.2.256 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.257 A potential moderate negative impact could arise on Anglesey AONB featured from MR policies; however this could be reduced to negligible through sensitive and appropriate design at the scheme level.

Historic Environment

- 4.2.258 Out of 23 identified designated heritage features within this PDZ, twelve features are likely to be affected by erosion as a result of NAI policy (all epochs). These include:
- Old customs post (Listed Building) at Porth Dafarch (PU 17.14);
 - Ynys Leurad Hut circle (SM) at Afon Alaw (PU 17.19);
 - Feilin Carnau Tide Mill, Felin Wen tide mill and Bodior tide mill (SM) at Rhyd y Gari sand (PU 17.9);
 - Newlands Fish Weir (SM) at Valley C (PU 17.21);
 - Listed Buildings and SM (Bridge) at Aberffraw (PU 17.3);
 - Trwyn Du round cairn (SM) at Aberffraw Sands (PU 17.4);
 - Church of St Cwyfan (Listed Building) at Porth Cwyfan (PU 17.4);
 - Tyn Towyn cottage (Listed Building) at Porth Nobla (PU 17.5);
 - Porth y Castell (Listed Building) at Porth Castell (PU 17.9); and
 - Rhoscolyn Lookout station (Listed Building) at Rhoscolyn (PU 17.9).
- 4.2.259 The following sites will be protected by the preferred management policy of HTL (epoch 2 and 3):
- Harbour, many Listed Buildings and historical features at Holyhead (PU17.15);
 - Four Mile Bridge (Listed Building) at Afon Alaw (PU 17.19); and
 - Stretch of sea wall at surf point (Listed Building) at Rhosneigr (PU 17.7).
- 4.2.260 Within this PDZ, two undesignated archaeological features found in PU 17.19 have the potential to be lost or damaged through the policy of NAI. However, five archaeological features will continue to be protected under HTL or MR for PUs 17.15 and 17.19. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.
- 4.2.261 Mitigation of impacted features associated with the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

- 4.2.262 The HTL policies for all epochs in PU 17.15 would maintain the operation of Holy Island harbour and marina.
- 4.2.263 Of the five features identified within PDZ 17, only the railway embankment at Afon Alaw (PU 17.19) will be significantly impacted – in this case a major positive impact through the maintenance of the embankment and subsequent access.

Population and Community

- 4.2.264 No significant impacts to properties are anticipated in this PDZ.
- 4.2.265 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.
- 4.2.266 No significant impacts to key industrial, commercial, economic and tourism assets and activities assets are anticipated in this PDZ.

PDZ 18 Twyn Cliperau to Trwyn Cwmrwd

Biodiversity, Flora and Fauna

- 4.2.267 No impacts are identified for SPA or SAC within this PDZ.
- 4.2.268 Within this PDZ, no direct or indirect effects on the interest features for the various SSSIs a result of coastal management policy are expected.
- 4.2.269 The majority of HTL policies in this PDZ are not anticipated to result in any significant reduction in intertidal BAP habitats as a result of sea level rise. The only potentially minor risks to the reduction of sandflat BAP habitat occur in PU 18.10 (Cemaes Harbour) in epoch 3, and PU 18.11 (Treath Mawr Promenade) in epoch 2, with a total potential loss of up to 0.5ha of sandflat BAP habitat.
- 4.2.270 The MR policies in epochs 1 for PUs 18.3 (Porth Trefadog), 18.6 (Cemlyn Bay and Headland), and epoch 3 in PU 18.11 could result in the loss of small proportions of terrestrial BAP habitat such as coastal and floodplain grazing marsh and bracken. The mitigation for the loss of bracken would be habitat creation subject to the MR policy details. Due to the rocky nature of this stretch of coastline losses are anticipated to be small.
- 4.2.271 MR policies are likely to result in the creation of additional intertidal habitat.

Geology and Geomorphology

- 4.2.272 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.273 A minor negative impact could arise on the Historic Landscape Area due to the policy at PU 18.17. A moderate positive impact is expected on the Heritage Coast mainly due to the removal of industrial features in PU 18.14, however, these features are also an element of the Anglesey AONB, and in response a minor negative impact would be expected.

Historic Environment

- 4.2.274 Out of 8 identified designated heritage features within this PDZ, three features are likely to be affected by erosion as a result of NAI policies. These include:

- Cestyll Historic Park and Listed Buildings at Porth y Felin (PU 18.1);
- Porth Wen brickworks (SM) at Porth Wen (PU 18.14); and
- Castell (SM) at Tre Fadog (PU 18.3).

4.2.275 Within this PDZ, four undesignated archaeological features found in PUs 18.1, 18.13, and 18.14 have the potential to be lost or damaged through the policy of NAI. However, two archaeological features will continue to be protected under HTL several policy units. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

4.2.276 Mitigation associated with the features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

4.2.277 Marine access and operations are not anticipated to be significantly affected by SMP policy in this PDZ.

4.2.278 Of the two features identified within PDZ 18, no significant negative impacts are expected although there may be a major positive impact on the Wylfa power station at Porth y Galen-ddu (PU 18.7), as it will be afforded protection.

Population and Community

4.2.279 No significant impacts to properties are anticipated in this PDZ.

4.2.280 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.

4.2.281 No significant impacts to key industrial, commercial, economic and tourism assets and activities assets are anticipated in this PDZ.

PDZ 19 East Bays Anglesey

Biodiversity, Flora and Fauna

4.2.282 No impacts are identified for SPA or SAC within this PDZ.

4.2.283 Within this PDZ, no direct or indirect effects on the interest features for the various SSSIs a result of coastal management policy are expected.

4.2.284 The HTL policies within PUs 19.1 (Benllech Beach road) and 19.12 (Red Wharf Bay) could result in constraint to intertidal BAP habitats, though many MR policies within this PDZ are expected to create intertidal habitat especially in PU 19.14 (Afon Nodwydd). The total potential loss of 0.1ha of intertidal mudflat and 3.8ha of intertidal sandflat habitat are not likely to happen given the orientation and topography of the policy units.

- 4.2.285 The MR policies for all epochs in PUs 19.4 (Porth Lydan), 19.14, epochs 1 and 2 for PU 19.2 (Portobello), epochs 1 for PU 19.7 (Traeth Bychan Centre), and epoch 3 for PUs 19.10 (Benllech Beach Road) and 19.12 (Red Wharf Bay) could result in the loss of small proportions of terrestrial BAP habitat including; broadleaved mixed Yew woodland, coastal and floodplain grazing marsh and fen, marsh and swamp. The mitigation for the loss of broadleaved mixed Yew woodland and fen, marsh and swamp would be habitat creation subject to the MR policy details.

Geology and Geomorphology

- 4.2.286 No impact on geological designations is anticipated for this PDZ.

Landscape

- 4.2.287 A minor negative impact is predicted on the Historic Landscape Area due to losses due to erosion and sea level rise resulting from NAI policy, and a moderate negative impact is expected on the Anglesey AONB due to the loss of built heritage features though this is offset by the protection and expansion of natural environment features. Furthermore, the significance of the negative impact could be reduced to minor through sensitive and appropriate design at the scheme level.

Historic Environment

- 4.2.288 Out of 6 identified heritage features within this PDZ, four features are likely to be affected by erosion as a result of NAI policies (all epochs). These include:

- Anglesey Bridge (Listed Building) at Red Wharf Bay (PU 19.14);
- Llandona Fish Weir (SM) at Red Wharf Bay (PU 19.15);
- Traeth Lligwy Fish Weir (SM) at Lligwy Sands (PU 19.3); and
- Lime Kilns, Anglesey Listed Buildings at Traeth Bychan (PU 19.7).

- 4.2.289 No major undesignated archaeological features are found in this PDZ.

- 4.2.290 Mitigation associated with the features of the historic environment may include excavation and recording and monitoring of erosion rates. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features depending upon the impacts of this type of management to other environmental designations.

Material Assets

- 4.2.291 Under the MR policies at PU 19.4 the Moelfre lifeboat station would be protected and its operation maintained for all epochs.
- 4.2.292 The NAI policy at Traeth Bychan in PU 19.9 may have a small impact on boat storage at this location.
- 4.2.293 No significant impacts are anticipated in this PDZ to critical infrastructure.

Population and Community

- 4.2.294 No significant impacts to properties are anticipated in this PDZ.
- 4.2.295 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.
- 4.2.296 No significant impacts to key industrial, commercial, economic and tourism assets and activities assets are anticipated in this PDZ.

PDZ 20 Llanfairfechan to Llanrwst

Biodiversity, Flora and Fauna

- 4.2.297 PU 20.1 contains designated intertidal habitat that could be affected by the proposed HTL policy for all epochs, in order to protect transport infrastructure (the A55). As the intertidal habitat is squeezed as a result of sea level rise and the constraint due to HTL policy, this could restrict beach width and result in a reduction in the extent of intertidal sandflat feature, which would also affect the conservation objectives of the reef and shallow and inlets and bays features within this SAC. An area of the Menai Straits SAC is also designated as part of the Lavan Sands Conwy Bay SPA, and subsequently the loss of supporting intertidal sandflat could affect the SPA interest species populations. Consequently, an adverse effect on the integrity of the Menai Strait and Conwy Bay SAC, and Lavan Sands Conwy Bay SPA is expected. The IROPI case will need to be made for this policy and compensatory habitat created where appropriate.
- 4.2.298 Though HTL is proposed in other PUs (namely 20.2, 20.3 and 20.11) which contain intertidal habitat, these are not within the SAC or SPA site boundaries, and no adverse effect would occur.
- 4.2.299 Similar to the Natura 2000 Sites of this PDZ, there is potential for the habitat interest features associated with the SSSIs such as sandflats and mudflats to be restricted in their natural development. This will occur for Aber Af On Conwy SSSI, Pen Y Googarth / Great Ormes Head SSSI, and Traeth Lafan SSSI along PUs 20.1, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8, 20.9, 20.10, 20.11, 20.15, 20.16, 20.17, 20.18, and 20.19. For HTL along these policy units, this will result in potential loss of habitats due to coastal squeeze, while MR along some sections could create additional habitat (e.g. intertidal) over the long term and reduce the scale of the potential impacts over the first and second epochs. The mitigation measures for habitat loss are likely to overlap with the compensatory habitat requirements for the Natura 2000 Sites, though some additional habitat creation may be necessary for terrestrial habitats.
- 4.2.300 The HTL policies in PUs 20.2 (Penmaenmawr), 20.3 (Conwy Morfa), 20.5 (Conwy), 20.11 (West Shore and Golf Course), 20.15 (Llandudno Junction and Ganol Estuary), 20.16 (Glan Conwy), and 20.17 (Glan Conwy to Tal-y-Cafn) could result in constraint to the natural development of intertidal habitat as a result of sea level rise, which could restrict beach width and result in a significant reduction in the extent of intertidal BAP habitat. The total losses for all epochs could be up to the following amounts: mudflat 14.5ha, sandflat 58.6ha, and saltmarsh 7.5ha. The majority of the losses for saltmarsh and mudflat occur in epoch 3, with the main losses for sandflat occurring in epochs 2 and 3.

4.2.301 All of the MR policies within this PDZ apart from epoch 2 in PU 20.19 (Tal-y-Cafn to Llanrwst) affecting terrestrial BAP habitats occur in epoch 3. For PUs 20.6 (Gyffin Valley), 20.9 (Deganwy Point), 20.11 (West Shore and Golf Course), and 20.15 (Llandudno Junction and Ganol Estuary) this policy could result in the loss of small proportions of terrestrial BAP habitat including; coastal and floodplain grazing marsh, broadleaved mixed Yew woodland, fen, marsh and swamp and standing open water canals. The main loss of standing open water canals occurs as the result of realignment through the nature reserve in PU 20.15. The mitigation for the loss of standing open water canals, broadleaved mixed Yew woodland and fen, marsh and swamp would be habitat creation subject to the MR policy details.

4.2.302 MR policies are likely to result in the creation of additional intertidal habitat.

Geology and Geomorphology

4.2.303 No impact on geological designations is anticipated for this PDZ.

Landscape

4.2.304 A moderate negative impact could arise on the Historic Landscape Area due to MR policies for PUs 20.3, 20.6, 20.8, 20.9, and 20.11, and a potential moderate adverse impact could arise on the significant viewpoints at Conwy Castle. However, the significance of the negative impacts could be reduced to negligible through sensitive and appropriate design at the scheme level.

Historic Environment

4.2.305 Out of 7 identified heritage features, the only feature likely to be affected by erosion as a result of NAI or disturbance as a result of HTL (over epoch 2 and 3 respectively) is Gogarth Grange (SM) at Gogarth (PU 20.12). Monitoring or localised management of shoreline retreat may reduce the potential damage or loss of this heritage feature depending upon the impacts of this type of management to other environmental designations.

4.2.306 However, the following site will be positively protected by the preferred management policy of HTL (epoch 3):

- Various Listed Buildings, Historic Park, Castle at Conwy (PU 20.6).

4.2.307 Within this PDZ, two undesignated archaeological features found in PUs 20.6 and 20.13 have the potential to be lost or damaged through the policy of NAI or MR. However, three archaeological features will continue to be protected under HTL for PUs 20.5 and 20.6. **Annex A2** provides further information on the archaeological features that may be affected in this PDZ.

Material Assets

4.2.308 Marine access and operations are not anticipated to be significantly affected by SMP policy in this PDZ.

4.2.309 Of the nine features identified within PDZ 20, six will experience major positive impacts from being afforded protection:

- Railway line at Llansanffraid Glan Conwy;
- Road and railway line at Tal y Cafn;
- Railway line at Penmaenmawr;
- A55 Chester to Bangor expressway at Llandudno;
- Three bridges crossing river at Afon Conwy; and
- Conwy tunnel entrances at Afon Conwy.

Population and Community

4.2.310 No significant impacts to assets are anticipated in this PDZ, while properties are unlikely to be affected in the last epoch associated with HTL at Penmaenmawr (PU 20.2) and Conwy (PU 20.5). Thus, protection of properties will continue along these policy units.

4.2.311 No significant impacts are anticipated key community, recreational and amenity facilities in this PDZ.

4.2.312 No significant impacts to key industrial, commercial, economic and tourism assets and activities assets are anticipated in this PDZ.

4.3 WFD Assessment

4.3.1 The majority of the SMP2 policies in the West of Wales SMP2 study area will not see deterioration in Ecological Status or Potential of the water bodies and therefore will not fail the WFD Environmental Objectives.

4.3.2 The WFD assessment of the SMP2 policies for each PDZ and the water body summary of achievement of WFD Environmental Objectives (see WFD Assessment Report), identified that some of the preferred policies within policy units have the potential to fail in meeting WFD 2, WFD 3 and WFD 4 Environmental Objectives. These policy units are summarised in **Table 4.23**.

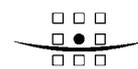


Table 4.23 Summary of the Policy Units that have the Potential to Fail the WFD Environmental Objectives

Water Body	TraC Type	WFD 2	WFD 3	WFD 4
Teifi	Transitional		5.11	
Cardigan Bay Central	Coastal		8.3	
Ystwyth / Rheidol	Transitional	9.3, 9.4, 9.6, 9.7	9.6	
Dyfi and Leri	Transitional	10.5, 10.6, 10.7, 10.8, 10.11		
Cardigan Bay North	Coastal	11.1, 11.3	10.17, 11.3	
Glaslyn	Transitional	12.13, 12.14		
Caernarfon Bay South	Coastal	16.1	16.1	
Cefni	Transitional	16.9	16.9	
Seiont	Transitional	16.11, 16.12		
Cymyran Bay	Coastal		17.7	17.8
Holyhead Bay	Coastal	17.15		
Anglesey North	Coastal	18.16	18.16	18.16
Conwy	Transitional	20.3 – 20.10, 20.16, 20.17	20.5	

Further details on the effects on designated water bodies are addressed in the Water Framework Directive Assessment for the West of Wales SMP2.

4.4 Cumulative Assessment

A key element of the consideration of environmental impacts at a strategic level is the potential for secondary, cumulative and synergistic effects on a particular environmental receptor to be assessed; both within the SMP and alongside other relevant plans or programmes. These impacts are often collectively termed cumulative impacts. **Table 4.24** sets out the significant environmental effects of the plan as a whole, which have been considered in relation to each of the environmental objectives.

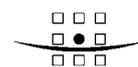


Table 4.24 Summary of Secondary, Cumulative and Synergistic Issues for each SEA Receptor

Cumulative effects identified (sum of policy unit impacts)	Interaction of relevant Plans and Programmes
Biodiversity, Flora and Fauna	
<p>Along the majority of the SMP frontage, a variety of coastal habitats are designated under international legislation for their conservation interests.</p> <p>The SMP recommends adopting a NAI policy along an increasing area of coastal/estuarine frontage to provide accommodation space for the natural roll-back or increase in extent of these internationally designated intertidal habitats. Continuing this policy along with MR in many areas, as well as allowing presently maintained defences to fail once their life has exceeded will have beneficial impacts on the designations and their interest features. There is also some potential of habitat re-creation for example MR policies are likely to result in the creation of additional littoral sediment BAP habitat within the majority of PDZs.</p> <p>This positive outcomes of habitat creation under MR compensates for the negative impacts of HTL policy along some sections of shoreline resulting in coastal squeeze and loss of intertidal habitats (mudflat, sandflat, and saltmarsh) mainly in estuarine systems but also along beaches within the open coast. However, the MR policy will also impact upon internationally and nationally designated areas.</p> <p>The Habitats Regulations Assessment (HRA) has deemed the following cumulative losses and gains as a result of the SMP2 policies for each of the designated habitat groups as:</p> <ul style="list-style-type: none"> • Intertidal sandflat – Total of 171.61ha (PDZ 2, 3, 10, 11, 12, 13, 16, and 20). • Saltmarsh marsh – Total of 147.25ha (PDZ 10, 12). • Intertidal mudflat – Total of 16.16ha (PDZ 16). <p>The HRA has deemed that compensatory habitat will need to be sourced through the RHCP. A total of 886.82ha will be needed.</p> <p>The PDZs that are considered to have an adverse effect on site integrity at this stage are as follows:</p> <ul style="list-style-type: none"> • PDZ 2 – Borough Head to Dinas Fach • PDZ 3 – Dinas Fach to Pen Anglas • PDZ 10 – Upper Borth to Tonfanau • PDZ 11 – Tonfanau to Mochras • PDZ 12 – Mochras to Pen ychain • PDZ 13 – Pen ychain to Trwyn Cilan • PDZ 16 – Trwyn Dylan to Llanfairfechan • PDZ 20 – Llanfairfechan to Llanrwst <p><i>Further details on the effects on international designated sites are addressed in the Habitats Regulations Assessment for the West of Wales SMP2 (Appendix G).</i></p>	<p>Key plans and polices which should be considered regarding their implications on the biodiversity, flora and fauna receptors of the SEA for the West of Wales SMP2 include:</p> <ul style="list-style-type: none"> • Pembrokeshire Coast National Park Local Development Plan 2011-2021 (Adopted September 2010); • Pembrokeshire Local Biodiversity Action Plan 2000; • Pembrokeshire and Ceredigion Rivers Catchment Flood Management Plan (Environment Agency Wales, 2010); • Pwllheli Flood Pilot Study (Climate change adaptation strategy); • South West Wales Integrated Transport Consortium - Regional Transport Plan (2009); • Ceredigion County Council Preferred Strategy Local Development Plan Consultation 2007 – 2022.Ceredigion County Council – Waste Strategy for Ceredigion; • Ceredigion Local Biodiversity Action Plan 2002; • The North Ceredigion Catchment Abstraction Management Strategy 2008; • South West Wales Regional Transport Plan (SWWITCH, 2009); • West Wales Regional Transport Plan (TRACC, 2009); • Snowdonia National Park Authority Eryri Local Development Plan 2007 – 2022 Written Statement (Deposit Version Spring 2009); • Gwynedd Unitary Development Plan 2001 – 2016; • Gwynedd Local Biodiversity Action Plan; • North West Wales Catchment Flood Management Plan (Environment



Cumulative effects identified (sum of policy unit impacts)	Interaction of relevant Plans and Programmes
	<p>Agency Wales, 2009);</p> <ul style="list-style-type: none"> • West Wales Regional Transport Plan (TRACC, 2009); • North West Wales Regional Transport Plan (Taith, 2009); • The Isle of Anglesey Local Development Plan (LDP) 2006 -2021; • Anglesey AONB Management Plan Review 2009; • Anglesey LBAP; • Gwynedd Unitary Development Plan 2001 – 2016; • Gwynedd Local Biodiversity Action Plan; and • The Ynys Môn (Anglesey) Catchment Abstraction Management Strategy Consultation Document 2006. <p>For other plans which may be of relevance to this receptor please refer to the Scoping Report (Appendix E of the ER).</p> <p>Key potential impacts of policy:</p> <ul style="list-style-type: none"> • A commitment to meet the LDPs and Wales Government key targets (e.g. for affordable housing) could result in new development adjacent to the coast. However, for majority of LDPs specific policies state that development within the coastal zone will only be permitted if it can be demonstrated that a coastal location is required. In addition LDPs such as the Pembrokeshire Coast National Park Local Development Plan 2011-2021 provides for the protection of European Sites. • The Snowdonia National Park Authority Local Development Plan undertook an HRA and identified that there are no adverse affects associated with the LDP, consequently, there is no in-combination impacts associated with the SMP and LDP.



Cumulative effects identified (sum of policy unit impacts)	Interaction of relevant Plans and Programmes
	<ul style="list-style-type: none"> • Objectives to manage biodiversity along the coastline could result in the SMP2 policies having an adverse impact on the LBAP objectives for example, within the Pembrokeshire LBAP maritime cliffs and sand dunes have been identified as being potentially influenced by the SMP2 policies. Similar habitats of the Conwy LBAP will also be influenced along with those associated with intertidal zone (e.g. saltmarsh and mudflats). For the Gwynedd LBAP maritime cliffs and wet woodlands have been identified as being potentially influenced by the SMP2 policies. No impacts to other LBAPs are anticipated. • The South West Wales Regional Transport Plan (SWWITCH, 2009) indicated that there is a potential impact on the Afon Teifi SAC from the North Cams to Ceredigion Link Road in relation to freshwater discharge/volumes/quality. These features do not act in-combination with the SMP policies, and therefore there is no in-combination effect. • The West Wales Regional Transport Plan (TRACC, 2009) indicated that there is a potential impact on the Lleyn Peninsula and the Sarnau SAC in the Dysynni Estuary as a result of construction works. It may be possible that the short-term impact would affect the habitats associated with PDZ 10, 11, 12 and 13. Therefore, there is a likely in-combination effect until mitigation is provided. • The SMP2 for the West of Wales needs to consider the current Pwllheli Pilot Flood Study (Climate change adaptation strategy) and associated adaptation strategies to manage flood risk to ensure no likely conflicts. <p><i>For further detailed description of the impacts of the plans refer to the Habitats Regulations Assessment for the West of Wales SMP2 (Appendix G of the SMP).</i></p>



Cumulative effects identified (sum of policy unit impacts)	Interaction of relevant Plans and Programmes
Earth Heritage, Soils and Geology	
<p>The preferred policies of NAI or MR have been recommended in areas where there are limited human assets or along areas of undeveloped coastline, which amongst other things ensures the preservation of the geological interests and nationally designated geological sites. For example, NAI policies around the much of the open coast in particular those sections which are GCR or Coastal Heritage will ensure that geological exposure continues.</p> <p>The cumulative impact on coastal geology of constraining coastal processes along the shoreline is of minor significance.</p>	<p>The SMP policies support the aims of development plans such as the Gwynedd Unitary Development Plan (2001 – 2016) and Ceredigion County Council Preferred Strategy LDP (2007 – 2022) that have a greater a greater emphasis on the protection of natural physical features such as the geological sites.</p>
Water	
<p>The separate WFD assessment addressed the impacts of proposed policies under the SMP on the four WFD Environmental Objectives for the freshwater, transitional, coastal and groundwater bodies.</p> <p>Environmental Objective WFD 2: Eight of the 20 PDZs were identified as having the potential to contribute to a failure to meet Environmental Objective WFD 2.</p> <p>Environmental Objective WFD 3: Eight of the 20 PDZs were identified as having the potential to contribute to a failure to meet Environmental Objective WFD 3.</p> <p>Environmental Objective WFD 4: Nine of the 20 PDZs were identified as having the potential to contribute to a failure to meet Environmental Objective WFD 4.</p> <p><i>Further details on the effects on designated water bodies are addressed in the Water Framework Directive Assessment for the West of Wales SMP2.</i></p>	<p>The purpose of the WFD is to ensure that coastal and estuarine waters achieve Good Ecological Status, and provides a framework and requirement for the SMP to put greater weighting on preventing new alteration and human pressures on the coastal and estuarine waters and minimise the existing pressures (i.e. defences) on the natural water environment.</p> <p>Implementation of the SMP will try to ensure full adherence to legislation and recommendations (wherever possible) for maintenance and improvement of water quality under the guidance of the WFD.</p>
Landscape Character and Visual Amenity	
<p>Overall, there is no plan to construct new defences in currently undefended areas, therefore most of the coastline and the character of the designations – two AONB and the 12 Heritage Coasts will have negligible cumulative impacts as they will remain as today. The Heritage Coasts mostly span areas that are continuing to be undefended and that will allow a continued natural erosion of varied coastline (NAI areas). The long term aim of the SMP is to sustain the important coastal communities and allow as much of the West of Wales shoreline to evolve naturally, therefore there will be significant changes to the landscape due to allowing existing defences to fail and either weather down or be removed. As natural processes are to be allowed where possible, these are assessed as cumulative beneficial effects. Any potential impacts to the landscape through management polices could be reduced through sensitive and appropriate design at the scheme level.</p>	<p>The SMP policies will be developed and implemented in accordance with the policies of the local AONB Management Plans for example, the Anglesey AONB Management Plan Review 2009. On the whole SMP policies limit policy that would result in visual alteration of the AONB due to human structures to existing locations of human activity and infrastructure, and encourage natural processes wherever possible. Consequently the SMP2 policies will not have an adverse in-combination impact with the policies of the Anglesey AONB. In addition LDPs, such as the Pembrokeshire Coast National Park Local Development Plan 2011-2021, aim to conserve and enhance special landscape characters.</p>



Cumulative effects identified (sum of policy unit impacts)	Interaction of relevant Plans and Programmes
Historic Environment (Cultural Heritage)	
<p>Moderate cumulative adverse impacts on statutory heritage assets are likely, as all policy options cause some adverse impact. Although the impact on designated heritage assets is moderate, the impact on non-designated assets is likely to be more severe, with many sites located on NAI frontages being destroyed or damaged since the greater percentage of fragile and vulnerable sites are located in the in the intertidal zone and coastal margins. MR and NAI will result in flooding or erosion of identified and unknown asset sites and HTL and MR will result in disturbance of heritage sites as new defences are built. Highly sensitive heritage sites (e.g. Scheduled Monuments) are likely to remain protected. A changing shoreline (whether through flooding /erosion or defence building) is likely to produce a continuous stream of archaeological finds and this will contribute to awareness and appreciation of the history of this coast.</p> <p>There are a wide range of heritage sites and features around the coastline, with many of these being protected through the SMP policies than would survive under a NAI policy. Significant protected assets include for example:</p> <ul style="list-style-type: none"> • St Patrick's Chapel at Whitesands Bay (PU 3.8); • Various Listed Buildings; • Several Listed Buildings and SMs at Cardigan (PU 5.12); • Listed Buildings at Aberaeron (PU 8.2); • Listed Buildings at Aberarth (PU 8.6); • Aberystwyth Castle (PU 9.7); • St Tanwg Church (PU 12.15); • Historic Park Penrhyn Castle (Listed Building) at Porth Penrhyn (PU 16.29); and • Various Listed Buildings, Historic Park, Castle at Conwy (PU 20.6). <p>These increased risks under the recommended long term plan for this SMP, must be recognised and consideration should be given to an appropriate programme of survey, recording and investigation to record these important sites, and those potential features not yet identified.</p>	<p>Policies within Local Development Plans will provide and advise on the protection for the historic environment. Implementation of the SMP will try to ensure full adherence to these policies (wherever possible) through coastal management activities.</p>



Cumulative effects identified (sum of policy unit impacts)	Interaction of relevant Plans and Programmes
Land Use, Infrastructure and Material Assets	
<p>The SMP has aimed to protect major infrastructure, commercial and industrial areas and material assets (e.g. ports, harbours, ferry links, major roads, rail, sewage treatment works, industrial depots, etc) for the entire SMP period, where economically viable to do so. This is to minimise risk to commercial property such as road and rail infrastructure at Fishguard (PU 4.2) which will be positively impacted, as defences within the harbour will be maintained protecting the railway line and roads.</p> <p>Infrastructure affected by MR or NAI is not strategic and its loss can be relatively easily mitigated at a local level for example relocation or realignment. For example, the MoD Royal Aircraft Establishment at Aberporth (PU 6.1) will be impacted upon through damage or loss by the policy of NAI, however, mitigation could be achieved through re-location of parts of the airbase.</p> <p>The SMP period allows for long term thinking, such that plans for future infrastructure maintenance and investment can be made well in advance, considering the planned and likely natural development of the shoreline.</p> <p>The proposed SMP policies are unlikely to affect marine activities with the majority of policies protecting key port, marina and harbour facilities. However, where there is a change in management policy and a return to natural processes is considered beneficial for European sites through either MR or NAI or where a hold the line policy is no longer acceptable economically or technically, there is potential for some impacts on infrastructure. Some re-routing of infrastructure will be required in the medium and longer term under this SMP such as railways and roads, though not many critical services are likely to be affected. While the preferred policy for the key urban areas is to HTL in the long term, there may be a detrimental impact on some infrastructure, where it will become increasingly technically difficult to retain coastal frontages.</p>	<p>This SMP document aim is to ensure that the coast and estuaries of the West of Wales is sustainably managed, the policies reflect this, particularly the long term view. Therefore, the implications of future development in either tidal floodplains or in coastal areas that are subject to erosion should be considered, particularly since development plans will influence the nature and location of new housing and infrastructure, for example:</p> <p>Transport and development plans will influence the nature and location of new infrastructure. For example, a key policy of the Ceredigion County Council Preferred Strategy Local Development Plan (2007 – 2022) is to safeguarding former railway lines and associated railway landholdings for potential sustainable transport and interchange development as indicated in the RTP.</p> <p>The SMP therefore should help to influence and ensure that new infrastructure is located appropriately where the risks from coastal flooding or erosion can be managed appropriately.</p>



Cumulative effects identified (sum of policy unit impacts)	Interaction of relevant Plans and Programmes
Population	
<p>There are several significant urban areas where the preferred SMP policy is to maintain existing defences, since they have been deemed economically viable in the long-term. This will result in a beneficial impact on people, their health and property by protecting the communities and their assets from flooding or erosion. Protection is predominantly focussed upon larger conurbations, where the highest level of benefit is achieved. The SMP has identified areas where a more naturally functioning coastline would be to the benefit of the natural environment and to estuarine processes. However, there would be potential changes to land and environmental assets should these policies be implemented.</p> <p>Cumulative impacts with respect to this receptor can be considered in terms of damages of residential and commercial assets that it cost for NAI (or MR) and the preferred plan. The plan provides for protection from erosion and flooding to a significant amount of properties and assets. Under the recommended policies the great majority residential and commercial assets will be protected, although the some assets may be impact upon by increased erosion and flood risk within the PDZs along the West of Wales.</p>	<p>This SMP document aim is to ensure that the coast and estuaries of the West of Wales is sustainably managed, the policies reflect this, particularly the long term view. Therefore, the implications of future development in either tidal floodplains or in coastal areas that are subject to erosion should be considered, particularly since development plans will influence the nature and location of new housing and infrastructure, for example:</p> <p>Pembrokeshire Local Development Plan Preferred Strategy Consultation Document 2011-2021: Between 3, 400 - 7000 houses could be provided over the plan period.</p> <p>Conwy Local Development Plan Preferred Strategy 2006: Proposal of 4,730 dwellings during the period from 2005 to 2020; and b) Propose an indicative range of 60 – 90 hectares of employment land. The areas include – Coast (East) Abergele, Llanddulas, Towyn & Kinnel Bay; Coast (Central) Bay of Colwyn, Llysfaen, Mochdre; Creuddyn including Conwy, Llandudno; Coast (West) Llanfairfechan, Penmaenmawr; rural; and all other communities.</p> <p>Ceredigion County Council Preferred Strategy Local Development Plan Consultation 2007 - 2022: The LDP will address tourism accommodation by allowing and encouraging accommodation development such as hotels and camping development sites.</p> <p>The Isle of Anglesey Local Development Plan (LDP) 2006 -2021: Strategic housing sites in main centres and hubs for some 700 dwellings (e.g. Holyhead Waterfront).</p> <p>The SMP therefore should help to influence and ensure that new housing and infrastructure is located appropriately where the risks from coastal flooding or erosion can be managed appropriately.</p>

4.5 Conclusion

Biodiversity, Flora and Fauna

- 4.5.1 Policies have been identified where it cannot be concluded that their policy suite would not have an adverse effect on the integrity of International Sites or that an adverse effect is likely, unless additional measures are provided in implementing specific policies, or policy intent is expressed in such a way (and through the SMP Actions) that would show clear avoidance of the physical disturbance from policy that could be resulting in an adverse effect on Site features. The sites affected are the Pembrokeshire Marine SAC, Llyn Peninsula and the Sarnau SAC, Dyfi Estuary SPA, Cors Fochno and Dyfi Estuary Ramsar, Menai Strait and Conwy Bay SAC, the Anglesey Coast: Saltmarsh SAC, and Lavan Sands Conwy Bay SPA.
- 4.5.2 The dominant effects result in constraints of HTL policy resulting in coastal squeeze and loss of intertidal habitats (mudflat, sandflat, and saltmarsh) as well as some possible loss of intertidal reef features, mainly in estuarine systems but also along beaches within the open coast. These losses and alterations also affect the estuary and shallow inlets and bays features due to the alteration to structure and function. This means that there will be a legal obligation under the Habitats Directive to find compensatory habitat to ensure the ecological coherence of the Natura 2000 (and Ramsar sites) network is protected. Compensatory habitat will be secured through the MR policies within the SMP where these result in the creation of additional habitats, as well as through the identification of other possible areas of MR not currently proposed, and through the Wales Regional Habitat Creation Plan being developed by the Environment Agency Wales. However, the adverse effect on the Sites' integrity will be subject to approval by CCW (and WAG) to a test of "no alternative solutions", and subsequently approval of "Imperative Reasons of Overriding Public Interest (IROPI)".
- 4.5.3 The impacts of the SMP policies on the SSSI interest features and BAP habitats are similar to those discussed above for the Natura 2000 designations, especially those associated with coastal and intertidal habitats. Generally throughout the SMP area there are potential losses of intertidal habitats associated with HTL policies which may result in the habitats being 'squeezed' against hard defences especially with SLR (see **Table 4.25**). In general where both terrestrial and intertidal habitats are present an HTL policy, while protecting the loss of the terrestrial habitat would have potential negative consequences on intertidal habitats. While areas with MR policies have the potential to create additional intertidal habitat and may act to mitigate for the losses as a result of HTL policies elsewhere, they could result in a reduction in terrestrial BAP habitat features which would potentially need to be mitigated through further habitat creation elsewhere.

Table 4.25 Summary of existing mudflat, sandflat and saltmarsh BAP habitat areas in the study area and potential areas at risk by epoch

BAP habitat type	Total existing BAP habitat (ha)	Area at Risk of Loss (ha)			
		Epoch 1	Epoch 2	Epoch 3	Total
Intertidal Mud	3,314	10	42	49	101
Intertidal Sand	4,020	22	91	107	221
Saltmarsh	1,417	30	73	27	130

Earth Heritage, Soils and Geology

- 4.5.4 Policies likely to impact on geological features or exposures are generally limited to HTL policies which could reduce the rate of exposure or erosion of the geological features, resulting in them becoming obscured by vegetation over time. The key geological features often associated with SSSI are generally located away from built frontages, where the policies of NAI generally support the presence of the interest features. Hence for the majority of the study area there are no impacts associated with the SMP policies. The main area where there is the potential for loss of geological exposure and damage to the geological component is in the Glannau Tonfanau / Friog SSSI where erosion rates may be reduced as a result of SMP policy intended to protect the nationally important railway line.

Water

- 4.5.5 As highlighted in **Section 4.4** and in the WFD assessment itself, the majority of the policies in the West of Wales SMP2 study area will not see deterioration in Ecological Status or Potential of the water bodies and therefore will not fail the WFD Environmental Objectives. There is a potential that Environmental Objectives WFD2, WFD3 and/or WFD4 may not be met in thirteen of the TraC water bodies.

Landscape Character and Visual Amenity

- 4.5.6 The impacts of the SMP on landscape character and visual affects are generally limited. In most cases the PUs within protected landscape areas are generally NAI except for localised areas fronting settlements and access. In these cases much of the character and visual amenity of the historic settlements is protected by HTL or MR policies. Where HTL and MR policies do occur the sheer scale of many of the coastal bays and coast allow many of the HTL policies to be assimilated into the overall scene of many of the landscape features including the National Parks, AONBs and Heritage Coast with very little visual intrusion, except in localised areas where built features already exist. Parks are only affected in localised areas with the Snowdonia National Park as a result of HTL policy and the requirement to protect key transport routes with impacts also associated with the loss of the settlement of Porth Dinllaen which would impact on the Heritage Coast and Historic Landscape Area, although the loss would maintain the natural feature of the Heritage Coast. At locations including Littlehaven, Solva, and Porthgain HTL and MR policies may also have an affect on Conservation Areas and result in some visual disturbance.
- 4.5.7 In most cases the sensitive and appropriate design of any HTL actions is likely to significantly reduce the scale of any impacts associated with SMP policies.

Historic Environment (Cultural Heritage)

- 4.5.8 The main impacts associated with the historic environment stem from the NAI policies which result in the natural loss of some open coastal historic features in response to continued natural erosion; as a result a large proportion of heritage features are lost within PDZ 1. These include many schedules monuments such as promontory forts and defended enclosures. The protection of heritage features including listed buildings and SMs generally occurs through SMP policies associated with built frontages and where HTL and MR policies are justifiable. Given that it is uneconomic and not sustainable to



protect the whole of the West of Wales coastline the loss of historic features through natural coastal erosion is inevitable. These losses are not as a direct result of SMP policy but do stem from the overall SMP management intent and long term aim of enabling the coastline to act and evolve naturally.

Material Assets

- 4.5.9 The main impacts to critical infrastructure as a result of SMP policies are generally focused in the lower lying estuary areas of areas such as Mawddach, Dovey and Afon Glaslyn estuaries in PDZs 10, 11 and 12 and also 16. In these areas the main affects are associated with the railway line and coastal roads. In many cases the railway line would require realignment in-land in order to mitigate the potential future loss of these access routes. Another area where key access roads would be lost would be with the realignment at Newgale Sands and the eventual loss of the A487.
- 4.5.10 In terms of impacts to marine operations, the SMP policies generally acknowledges the economic importance of marine access and operations and for the main these are supported throughout the SMP area through HTL policies for all epochs associated with the protection of key harbours and marinas such as Fishguard, New Quay, Aberaeron, Porthmadog, Pwellheli, Caernarfon, Yfelinhel, Port Penrhyn, and Holy Island harbours. In some circumstances there may be the loss of access associated with the loss of local slipways, although in these cases the policies are generally MR and as such it is likely slipways and access would be realigned and access maintained. Overall therefore it is concluded the SMP is not anticipated to have any significant impacts on marine access or operations.

Population

- 4.5.11 Generally the SMP is not anticipated to have a significant overall affect on commercial or tourism assets, the only areas which could be significantly affected are in PDZ 16 with the policies of MR/NAI posing some risk to the Caernarfon Airfield due to SLR making the defences unsustainable. The trout farm ponds at Ponllyfni may also be impacts and would require the relocation of the farm or substantial private defence works.
- 4.5.12 Throughout the SMP area properties and local access is protected through HTL and MR policies. In some locations such as at Clarach Bay, Borth, Fairbourne, and Llanfairfechan the policy of MR is anticipated to impact on properties through loss due to erosion or flooding in the long-term. In certain cases these impacts can to some degree be mitigated fro through the provision of early warning systems for flooding and the relocation of properties. Where it is not sustainable to maintain properties the intent of the SMP policy is to allow time for frontages to be adapted and properties relocated if required.

Conclusion

- 4.5.13 Overall, the SMP can therefore be concluded to have provided a range of benefits to the social and economic values of the West of Wales shoreline and where moderate or major negative effects have been identified in particular associated with biodiversity, flora and fauna; heritage and assets, mitigation and management measures have been devised to address these effects where possible.

5 MONITORING AND MITIGATION

5.1 Introduction

5.1.1 Of the minor adverse effects identified in this assessment (detailed in **Appendices A to D**), some are addressed within the wider context of synergies and balance in relation to the effects of other management areas, whilst some require specific management. SMP policy in some management areas work against natural processes, for example, in order to hold key areas of coast to protect other environmental values. It is the manner in which policy is applied across the whole SMP area, in order to provide balance, that is the important factor in such examples and therefore, mitigation or monitoring is not appropriate or required.

5.1.2 However, the SMP does require mitigation and/or monitoring for singular effects, where an adverse effect has been identified. It is considered that in this context, the following measures are required to support the SMP to avoid an adverse effect on the environmental values of West of Wales shoreline.

- Development of habitat management and monitoring plans, where appropriate;
- Compensation for the habitat losses identified within the HRA – compensatory habitat will be sought and secured through the RHCP on approval from CCW and the Environment Agency Wales.
- Investigate the specifics for habitat creation under MR and NAI policies;
- Continuing to consult key stakeholders and the general public during strategy development; and
- Further studies at strategy or scheme level to investigate the potential impacts of flooding and erosion on important heritage features (known and unknown) at risk and to consider an appropriate programme of survey, recording and investigation to record these important sites, and those potential features not yet identified.

5.1.3 Specific monitoring with an SEA focus will be undertaken to inform subsequent levels of assessment (e.g. environmental assessment at strategy and scheme level). The Action Plan in the main SMP document identifies estuary wide and local studies that will be required to inform the policies. These studies will be undertaken to inform future reviews of the West of Wales SMP.

5.2 Habitat Monitoring and Management

Effects on the Integrity of International Sites (SAC, SPA and Ramsar)

5.2.1 The PDZs that were identified as having an adverse effect on the integrity of international sites (as identified during the West Wales SMP HRA) are as follows:

- PDZ 2 – Borough Head to Dinas Fach
- PDZ 3 – Dinas Fach to Pen Anglas
- PDZ 10 – Upper Borth to Tonfanau
- PDZ 11 – Tonfanau to Mochras
- PDZ 12 – Mochras to Pen ychain

- PDZ 13 – Pen ychain to Trwyn Cilan
- PDZ 16 – Trwyn Dylan to Llanfairfechan
- PDZ 20 – Llanfairfechan to Llanrwst

5.2.2 **Table 5.1** presents a summary of the International Sites, habitat types and physical extents that are currently identified as occurring as a result of the SMP policies. Since the assessment is of the plan, rather than a constituent policy, it is concluded therefore that the SMP will have an adverse effect on the integrity of International Sites. The Cors Fochno and Dyfi Ramsar site would also be affected, however, the habitat losses that affect this site are already included within the Lley Peninsula and the Sarnau SAC habitat losses within Policy Unit 10.

Table 5.1 Summary of PDZs where Adverse Effect on Integrity of International Sites is Predicted, Showing Habitat Types Effected and Likely Extent

Designated Site	PDZ	Habitat Type	Habitat area reduction (ha)			
			Epoch 1	Epoch 2	Epoch 3	Total
Pembrokeshire Marine SAC	2	Intertidal sandflat	0.76	1.07	0.00	1.83
Pembrokeshire Marine SAC	3	Intertidal sandflat	0.29	0.45	0.39	1.13
Lley Peninsula and the Sarnau SAC	10	Intertidal sandflat	8.74	46.30	36.03	91.07
	10	Saltmarsh	20.09	69.15	27.93	117.17
Lley Peninsula and the Sarnau SAC	11	Intertidal sandflat	4.44	9.18	7.08	20.70
	11	Saltmarsh	1.70	2.99	4.00	8.69
Lley Peninsula and the Sarnau SAC	12	Intertidal sandflat	2.50	14.45	22.22	39.17
	12	Saltmarsh	1.78	6.36	13.25	21.39
Lley Peninsula and the Sarnau SAC	13	Intertidal sandflat	0.20	1.19	0.80	2.19
Traeth Lafan / Lavan Sands, Conwy SPA	16	Supporting habitat*	2.85	11.60	0.00	14.45
Menai Strait and Conwy Bay SAC	16	Intertidal sandflat	2.85	11.60	0.00	14.45
Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh SAC	16	Intertidal mudflat	0.85	4.25	11.06	16.16
Traeth Lafan / Lavan Sands, Conwy SPA	20	Supporting habitat*	0.06*	0.28*	0.73*	1.07*
Menai Strait and Conwy Bay SAC	20	Intertidal sandflat	0.06	0.28	0.73	1.07

na = actual extent unknown but is related to the loss of intertidal habitat identified within the Site for the PDZ.

* supporting habitat is related to the intertidal habitat loss in the same unit for the relevant SAC.



- 5.2.3 In particular, there will be a shift in transitional habitat composition (particularly the loss or gain of intertidal habitat and the relative ratios of mudflat to saltmarsh). This means that there is a legal obligation under the Habitats Directive to find compensatory habitat to ensure the ecological coherence of the *Natura 2000* (and Ramsar sites) network is protected. Compensatory habitat will be secured through the RHCP; this would be subject to approval by the CCW and WAG to a test of “no alternative solutions”, and subsequently approval of “Imperative Reasons of Overriding Public Interest (IROPI)”.
- 5.2.4 Further monitoring and study requirements may need to be developed at the locations sites listed in **Table 5.1**.

Impacts on SSSIs and BAP Habitats

- 5.2.5 The SMP has the potential to affect the condition of SSSIs through changes in habitat and coastal management (due to the number of SSSIs on the coast), with knock-on effects on the high level targets relating to SSSIs in favourable condition. A key tool, therefore, in managing and monitoring change for the West of Wales shoreline is the continued monitoring of SSSI units, which enables an early determination of where favourable condition may be threatened by inappropriate coastal management (SMP policy). It is considered that the existing monitoring programme undertaken by CCW would be sufficient for this purpose, but there is a need to feed any initial findings into the SMP Action Plan and the development of subsequent SMP policy at the earliest stage. In addition, there is a need, to ensure that existing monitoring of BAP habitat in the plan area is provided in a manner which will highlight shifts in BAP habitat extent, and informs the BAP recording process. This mechanism is required to ensure that wider mechanisms exist for BAP habitat creation which addresses emerging requirements based on the effects of the SMP.
- 5.2.6 The SMP provides policy direction which is indicative of expenditure required on the coast. Simply, where SMP policy relates to the provision, enhancement or replacement of defences, the SMP policy will be instrumental in securing funding for schemes, since it is a key consideration in the determination of applications for funding.
- 5.2.7 It is not the intent or role of the SMP to secure funding, as a mechanism for policy. It therefore follows that in providing policy direction, the SMP fulfils its role in identifying the areas where funding will be required. To this end, it is considered outside of the scope of the SMP to provide funding as mitigation for policy.
- 5.2.8 The compensatory habitat requirements under the HRA (**Table 5.1** above) are anticipated to be sufficient to offset the losses associated with the loss of intertidal BAP mudflat, sandflat, and saltmarsh habitats, combined with the intertidal habitats created by the MR policies elsewhere within the SMP study area.

Investigation of Historic Environment and Geological Sites

- 5.2.9 SMP policy could lead to the loss of designated heritage assets which are important to the historic environment. The main historic feature at risk and which would require further investigation and recording are listed and highlighted in **Table 3.1** and includes approximately 77 features. Within the SMP Action Plan therefore, Cadw will be instrumental in establishing what the specific nature of losses may be, and where losses are known, a figure for investigation established so that this funding can be sought from Government. The intent of addressing this matter within the SMP Action Plan will be to ensure that Cadw and partners are provided with funds, in advance to investigate threatened sites.
- 5.2.10 For geological sites where potential reduced exposure may occur, documenting and recording should be undertaken for the geological interest features for the following designations:
- Arfordir Niwglw-Aber Bach / Newgale to Little Haven Coast SSSI;
 - Traeth Llanon SSSI;
 - Allt Wen A Traeth Tanybwlich SSSI; and
 - Glannau Tonfanau I Friog SSSI.

6 THE NEXT STEPS IN THE SEA PROCESS

6.1 Consultation Responses

6.1.1 This report is provided for consultation simultaneously with the SMP itself. Comments should be provided either in writing or electronically to:

Emyr.Williams@pembrokeshire.gov.uk

c/o Emyr Williams

Pembrokeshire County Council

County Hall

Haverfordwest

Pembrokeshire

SA61 1TP

6.2 The Purpose of the Consultation

6.2.1 The purpose of consultation for this report is to establish:

- Have the environmental issues been correctly identified?
- Does the report correctly identify the assessment criteria which should be used to assess the plan?
- Is the information provided correct? and
- If issues or detail have been omitted which should be a key element of the assessment?

6.2.2 Answers to these questions, or other issues relating to the environmental effects of the plan would be welcome as a component of consultation. Feedback received will shape the finalisation of this report and the evaluation of the environmental effects of the SMP. The final consideration and endorsement of the plan will be provided in response to these issues.

6.3 Subsequent Documents

6.3.1 The consultation responses received will be reviewed in the light of whether they would result in a significant change to the potential impacts of the proposed policies within the draft SMP. This will be undertaken with the SMP developers in order to ascertain whether an appropriate alteration to a preferred policy is necessary, or whether a clearer statement of intent could alleviate a potential issue or impact, or whether specific reference within the SMP Action Plan is necessary. Furthermore, the consultation responses on the SMP could result in a change to the preferred policies. If this occurs, the findings within this ER will be reviewed and the impacts reassessed.

6.3.2 The results of the review of consultation responses and any changes to the SMP policies will be reported on within a Post Adoption Statement. This will also detail how the environmental considerations have been integrated within the SMP.

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7 REFERENCES

CCW (2007). Countryside Council for Wales SEA Guidance Note Series.

Countryside Council for Wales, English Nature, Environment Agency, Royal Society for the Protection of Birds (2004). Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners.

Defra (2004). Guidance on SEA. Department of Environment, Food and Rural Affairs.

Defra (2004). Guidance on SEA. Department of Environment, Food and Rural Affairs.

Defra (2006a). *Shoreline Management Plan Guidance Volume 1: Aims and Requirements*. Department of Environment, Food and Rural Affairs.

Defra (2006b). *Shoreline Management Plan Guidance Volume 2: Procedures*. Department of Environment, Food and Rural Affairs.

Environmental Assessment of Plans and Programmes (Wales) Regulations 2004.

European Commission (1992). Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Known as the 'Habitats Directive'.

European Commission (2001). Directive 2001/42/EC of the European Parliament and the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment. Known as the 'Strategic Environmental Assessment'.

Environment Agency (2005). Environment Agency Guidance on Strategic Environmental Assessment.

Environment Agency (2009). Internal Guidance on SEA of plans and programmes.

Halcrow (2010). North West England and North Wales Shoreline Management Plan.

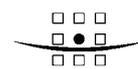
Pembrokeshire Coast National Park Authority and CCW (2007). Pembrokeshire Coast National Park Landscape Character Assessment Study. Produced by John Campion Associates Ltd on behalf of Pembrokeshire Coast National Park Authority and CCW.

ODPM (2005). A Practical Guide to the Strategic Environmental Assessment Directive. Office of the Deputy Prime Minister.

TAN 5 - Nature Conservation Planning (WAG, 2009).

WAG (2007). Welsh Coastal Tourism Strategy, draft final strategy document January 2007. Welsh Assembly Government.

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8 ABBREVIATIONS AND ACRONYMS

Abbreviation	Definition
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
ATL	Advance the Line
BAP	Biodiversity Action Plan
BMP	Beach Management Plan
BQE	Biological Quality Element
CFMP	Catchment Flood Management Plan
CCW	Countryside Council for Wales
CRoW	Countryside and Rights of Way
CSG	Client Steering Group
Defra	Department for the Environment, Food and Rural Affairs
EA	Environment Agency
EC	European Commission
EIA	Environmental Impact Assessment
EMP	Estuary Management Plan
EMS	European Marine Site
ER	Environmental Report
EU	European Union
FWB	Freshwater Body
GCR	Geological Conservation Review
GEP	Good Ecological Potential
GES	Good Ecological Status
GIS	Geographical Information Systems
GWB	Groundwater Body
Ha	Hectares
HAPS	Habitat Action Plans
HEAP	Historic Environment Action Plan
HER	Historic Environment Record
HLC	Historic Landscape Characterisation
HRA	Habitats Regulations Assessment
HTL	Hold the Line
IROPI	Imperative Reasons of Overriding Public Interest
JNCC	Joint Nature Conservation Committee
km	Kilometre
km ²	Kilometre squared (or 100ha)
LB	Listed Building
LBAP	Local Biodiversity Action Plan
LNRs	Local Nature Reserves
m	Metre
MAN	Management Unit
MNR	Marine Nature Reserve
MR	Managed Realignment



Abbreviation	Definition
NAI	No Active Intervention
NE	Natural England
NEAS	National Environmental Assessment Service
NNR	National Nature Reserve
NTS	Non-Technical Summary
°C	Degrees Celsius
ODPM	Office of the Deputy Prime Minister
PDZ	Policy Development Zone
PPPs	Plans, Programmes and Policies
PU	Policy Unit
R&D	Research and Development
RCAHMW	Royal Commission on the Ancient and Historical Monuments of Wales
RBD	River Basin District
RBMP	River Basin Management Plan
RDP	Rural Development Plan
RHCP	Regional Habitat Compensation Programme
RIGS	Regional Important Geodiversity Sites
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessment
SLA	Special Landscape Area
SM	Scheduled Monument
SMP	Shoreline Management Plan
SMP2	First review of the Shoreline Management Plan
SM	Schedules Monument
SPA	Special Protection Area
SPR	Source Pathway Receptor Model
SR	Scoping Report
SSSI	Site of Special Scientific Interest
TraC	Transitional and Coastal water body
UK	United Kingdom
UKBAP	UK Biodiversity Action Plan
UKCP	UK Climate Projections
WAG	Welsh Assembly Government
WFD	Water Framework Directive
WHS	World Heritage Site
WLMP	Water Level Management Plan
WPM	With Present Management
WWTP	Waste Water Treatment Plant

GLOSSARY OF TERMS

Adapted from: http://www.environment-agency.gov.uk/commdata/acrobat/6_chapter_5_glossary_1388113.pdf

Area of Outstanding Natural Beauty (AONB)

Areas of Outstanding Natural Beauty (AONBs) have been formally designated under the National Parks and Access to the Countryside Act of 1949 to protect areas of the countryside of high scenic quality that cannot be selected for National Park status due to their lack of opportunities for outdoor recreation (an essential objective of National Parks). The Countryside Agency is responsible for designating AONBs and advising Government and others on how they should be protected and managed. Further information on AONBs can be found at <http://www.aonb.org.uk/>

Biodiversity Action Plan (BAP)

An agreed plan for a habitat or species, which forms part of the UK's commitment to biodiversity. For further information consult the BAP website: <http://www.ukbap.org.uk>

Birds Directive

European Community Directive (79/409/EEC) on the conservation of wild birds. Implemented in the UK as the Conservation (Natural Habitats, etc.) Regulations (1994). For further information consult the HMSO website: http://www.hmso.gov.uk/si/si1994/Uksi_19942716_en_1.htm

Consultation Bodies

Authorities, which because of their environmental responsibilities are likely to be concerned by the effects of implementing, plans and programmes and must be consulted at specified stages of the SEA.

Environment Agency Wales

Non-departmental public body responsible for the delivery of government policy relating to the environment and flood risk management in Wales.

Environmental Appraisal

A form of environmental assessment used in the UK (primarily for development plans) since the early 1990s, supported by "Environmental Appraisal of Development Plans: A Good Practice Guide" (DoE, 1993); more recently superseded by sustainability appraisal. Some aspects of environmental appraisal foreshadow the requirements of the SEA Directive.

Environmental Impact Assessment (EIA)

Generically, a method or procedure for predicting the effects on the environment of a proposal, either for an individual project or a higher-level "strategy" (a policy, plan or programme), with the aim of taking account of these effects in decision-making. The term "Environmental Impact Assessment" (EIA) is used, as in European Directive 337/85/EEC, for assessments of projects. Both SEA and EIA are levels of environmental assessment – the former is undertaken at a strategic level and the later at project level.

Environmental Report (ER)

Document required by the SEA Directive as part of an environmental assessment, which identifies, describes and evaluates the likely significant effects on the environment of implementing a plan or programme.

Environmentally Sensitive Areas (ESA)

ESA schemes were introduced by the Ministry of Agriculture, Fisheries and Food (MAFF; predecessor to Defra) in 1987 and are designated under the provisions of sections 18 and 19 of the 1986 Agriculture Act and Environmentally Sensitive Area (Stage II) Designation (Amendment)(No2) Order 2001. They are governed by Defra and offer incentives (on a 10 year agreement with a 5 year break clause) to encourage farmers to adopt agricultural practices which would safeguard and enhance parts of the country of particularly high landscape, wildlife or historic value. Further detail can be found on Defra's website:

<http://www.defra.gov.uk/erdp/schemes/esas/default.htm>

Flood Map

The Flood Map is the Environment Agency's public face map for floodplain information. It shows the Flood Zone extents, which ignore defences, the location of raised defences, and the area benefiting from defences. Available on the Environment Agency's website, it also provides information on the likelihood of flooding to general areas of land.

Freshwater Fisheries Directive Designation

EC Directive 78/659/EEC on the Quality of Fresh Waters Needing Protection or Improvement in order to Support Fish Life ('The Freshwater Fish Directive') aims to protect and improve water quality and forms part of the Environment Agency's water quality monitoring programme. Under the Directive the UK Government was required to designate two categories of water: those suitable for salmonids (waters that have the potential to support fish of the family Salmonidae, mainly salmon and trout but also grayling) and those suitable for cyprinids (from the family Cyprinidae plus pike, perch and eel). The Directive sets standards to safeguard freshwater fisheries, mainly relating to the quality of the water, and requires that certain designated stretches of water meet these standards in order to enable fish to live or breed. For further information please consult the website: <http://www.environment-agency.gov.uk/>

Geographical Information System (GIS)

A GIS is a computer-based system for capturing, storing, checking, integrating, manipulating, analysing and displaying data that are spatially referenced.

Groundwater

Water occurring below ground in natural formations (typically rocks, gravels and sands).

Indicator

A measure of variables over time, often used to measure achievement of objectives.

Land Use

Various designations of activities, developments, cropping types, etc for which land is used.

Land Management

Various forms of activities relating to agricultural, forestry, etc practice.

Local Authority Development Plans

These statutory land development plans generally cover a 10-year period from the date of their adoption.

Local Biodiversity Action Plan (LBAP)

A local agenda (produced by the local authority) with plans and targets to protect and enhance biodiversity and achieve sustainable development. We are committed to Biodiversity Action Plans and works with central government (Rio Earth Summit, 1992) to realise LBAP objectives.

Mitigation

Used in this SEA to refer to measures to avoid, reduce or offset significant adverse effects on the environment.

National Nature Reserve (NNR)

National Nature Reserves are designated under the National Parks and Access to the Countryside Act 1949 or the Wildlife and Countryside Act 1981 (as amended) primarily for nature conservation, but can also include sites with special geological or physiographic features. They were established to protect the most important areas of wildlife habitat and geological formations in Britain, and as places for scientific research. All NNRs are “nationally important” and are best examples of a particular habitat/ecosystem. NNRs receive SSSI designation under The Countryside and Rights of Way Act 2000 and The Wildlife and Countryside Act 1981 (as amended).

National Parks

Extensive tract of countryside designated under the 1949 National Parks and Access to the Countryside Act for reasons of its natural beauty and for the opportunities it affords for open air recreation. Designation supports the conservation and enhancement of its landscapes, wildlife and cultural heritage, and the promotion of understanding and enjoyment of its special qualities. For further information please consult the National Park Authorities website at <http://www.anpa.gov.uk/>

Objective

A statement of what is intended, specifying the desired direction of change in trends.

Ordnance Datum Newlyn

Ordnance Datum Newlyn (ODN) is a traditional vertical coordinate system, consisting of a tide gauge datum with initial point at Newlyn (Cornwall) and a Terrestrial Reference Frame observed by spirit levelling between 200 fundamental bench marks across Britain. Each bench mark has an orthometric height only (not ellipsoid height or accurate horizontal position). This coordinate system is important because it is used to describe vertical positions of features on British maps (for example, spot heights and contours) in terms of height above mean sea level. The word Datum in the title refers, strictly speaking, to the tide gauge initial point only, not to the national levelled bench marks.

Plan or Programme

The term “plan or programme” covers any plans or programmes to which the SEA Directive applies.

Ramsar Site

Internationally important wetland areas designated under the 1971 Ramsar Convention on 'Wetlands of International Importance Especially as Waterfowl Habitat'. Further information can be located on the RAMSAR convention on wetlands website: <http://www.ramsar.org/>

Responsible Authority

The organisation which prepares a plan or programme subject to the Directive and is responsible for the SEA.

Scheduled Monuments

To protect archaeological sites for future generations, the most valuable of them may be "scheduled". Scheduling is the process through which nationally important sites and monuments are given legal protection by being placed on a list, or 'schedule'

Scoping

The process of deciding the scope and level of detail of an SEA, including the environmental effects and alternatives which need to be considered, the assessment methods to be used, and the structure and contents of the Environmental Report.

Screening

The process of deciding whether a plan or programme requires SEA.

Shingle beach

A shingle beach is a [beach](#) which is [armoured](#) with [pebbles](#) or small to medium sized cobbles. Typically the stone composition may grade from characteristic sizes ranging from 2 to 200 millimeters in diameter.

Shoreline Management Plan (SMP)

Non-statutory plans to provide sustainable coastal defence policies (to prevent erosion by the sea and flooding of low-lying coastal land), and to set objectives for the future management of the shoreline. They are prepared by the Environment Agency and maritime local authorities, acting individually or as part of coastal defence groups.

Significant environmental effects

Effects on the environment which are significant in the context of a plan or programme. Criteria for assessing significance are set out in Annex II of the SEA Directive.

Site of Special Scientific Interest (SSSIs)

Nationally important sites forming a network of the best and most representative examples of our wildlife and geodiversity features. Selected and designated by CCW and afforded protection under the Wildlife and Countryside Act 1981 (as amended).

Special Area of Conservation (SACs)

SACs are designated under European Communities Directive 92/43/EEC known as the 'Habitats Directive'. This requires the conservation of important, rare or threatened habitats and species across Europe.

Special Protection Area (SPAs)

SPAs are designated under the European Communities Directive 79/409/EEC, known as the 'Birds Directive', to conserve the habitats of certain migratory or rare birds.

Strategic Environmental Assessment (SEA)

Generic term used to describe environmental assessment as applied to policies, plans and programmes. In this report, "SEA" is used to refer to the type of environmental assessment required under the SEA Directive.

SEA Directive

European Directive 2001/42/EC "on the assessment of the effects of certain plans and programmes on the environment".

SEA Regulations

The regulations transposing the SEA Directive into law, namely The Environmental Assessment of Plans and Programmes Regulations 2004.

Strategic Flood Risk Assessment (SFRA)

A broad scale assessment of flood risk carried out by a unitary authority or district council. Such Documents are drafted so that proposed developments can be quickly appraised to Planning policy Guidance.

Structure Plan

A statutory plan comprising part of the Development Plan, prepared by County Councils or a combination of unitary authorities, containing strategic policies that cover key planning issues over a broad area and provide a framework for local planning.

Sustainability

Is a concept, which deals with mankind's impact, through development, on the environment. Sustainable development is 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987). It should also take account, for example, of the long-term demands for non-renewable materials.

Water Framework Directive (WFD)

European Community Directive (2000/60/EC) on integrated river basin management. The WFD sets out environmental objectives for water status based on: ecological and chemical parameters; common monitoring and assessment strategies; arrangements for river basin administration and planning; and a programme of measures in order to meet the objectives. For further detail consult the European Commission website: <http://europa.eu.int>

Wildlife & Countryside Act

The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife. The Wildlife and Countryside Act is divided into four parts:

- Part I is concerned with the protection of wildlife;
- Part II relates to the countryside and national parks (and the designation of protected areas);
- Part III covers public rights of way; and
- Part IV deals with miscellaneous provisions of the Act.

The designation of protected species is included in Schedules 1, 5 and 8 of the Act, which list protected birds, protected animals and protected plants, respectively.

ANNEX A - DETAILED ASSESSMENT TABLES FOR MATERIAL ASSETS AND BUILT HERITAGE

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
1.1	St Annes Head	Coastal Road	Coastal Road for access to light house	Population	Local	NAI - Erosion likely to lead to damage and subsequent loss of road and access. Therefore a minor negative impact.	NAI - Erosion likely to lead to damage and subsequent loss of road and access. Therefore a minor negative impact.	NAI - Erosion likely to lead to damage and subsequent loss of road and access. Therefore a minor negative impact.	
1.1	St Annes Head	Listed Building	Telegraph Station	Historic Environment (Cultural Heritage)	National	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
1.1		Listed Building	Lime Kiln at Mill Haven	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	Recording.
1.1	St Annes Head	Historical	Old Lighthouse and Command post	Historic Environment (Cultural Heritage)	Local	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
1.1	Little Castle Point	SAM	Hillfort, SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	Excavation and recording.
1.1	Dale, Mainland	Archaeology	Flint working site (Neolithic,Mesolithic)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Dale, Mainland	Archaeology	Findspot (Mesolithic)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Dale, Mainland	Archaeology	Round barrow, Burnt mound (Bronze Age;Prehistoric)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Great Castle Head	SAM	Hillfort, SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
1.1	Pembrokeshire Coast	Heritage Coast	Heritage Coast	Landscape Character and Visual Amenity	National	NAI - The site will be allowed to develop as determined by the natural coastal processes. Therefore a neutral impact.	NAI - The site will be allowed to develop as determined by the natural coastal processes. Therefore a neutral impact.	NAI - The site will be allowed to develop as determined by the natural coastal processes. Therefore a neutral impact.	
1.1	Westdale Bay	Historical	Deserted early settlement	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	
1.1	The Hooksies	Historical	Unenclosed settlement	Historic Environment (Cultural Heritage)	Local	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
1.1	Hoopers point	Historical	defence post	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	
1.1	Hoopers point	Historical	Firing Range	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	
1.1	Marloes Sands	Historical	Greatmire Mill	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	
1.1	Marloes Sands	Access	Access to beach	Population	Local	NAI - Steps likely to be damaged or lost due to erosion preventing access to the beach at this location. Therefore a minor negative impact.	NAI - Steps likely to be damaged or lost due to erosion preventing access to the beach at this location. Therefore a minor negative impact.	NAI - Steps likely to be damaged or lost due to erosion preventing access to the beach at this location. Therefore a minor negative impact.	
1.1	Gateholm Island	SAM	Monastery/enclosed settlement SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
1.1	Albion Sands	Protected Wreck	Wreck	Historic Environment (Cultural Heritage)	National	NAI - No change in current processes. Sea level rise may lead to drowning of wreck removing it from the intertidal zone and preserving it for longer. Therefore a neutral impact.	NAI - No change in current processes. Sea level rise may lead to drowning of wreck removing it from the intertidal zone and preserving it for longer. Therefore a neutral impact.	NAI - No change in current processes. Sea level rise may lead to drowning of wreck removing it from the intertidal zone and preserving it for longer. Therefore a neutral impact.	
1.1	Watery Bay	SAM	SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	Excavation and recording.
1.1	Jack Sound	SAM	Deer Park promontory Fort SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
1.1	Haven Point	Historical	Observation post	Historic Environment (Cultural Heritage)	Local	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
1.1	Martins Haven	Historical	Landing point	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	
1.1	West Hook farm	Historical	Reservoir	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	
1.1	Howney Stone	Historical	Observation post	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	
1.1	Hopgang	Historical	Medieval Quarry	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	
1.1	Musselwick Mouth	Historical	Post Medieval quarry	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
1.1	Musselwick Mouth	Historical	WW2 air gunnery and bombing range lookout tower, now destroyed	Historic Environment (Cultural Heritage)	Local	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
1.1	Tower Point	SAM	Tower Point Rath SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
1.1	Huntsmans Leap	Historical	WW2 air gunnery and bombing range lookout tower, now destroyed	Historic Environment (Cultural Heritage)	Local	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
1.1	Castle Head	SAM	Castle Head defended enclosure SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
1.1	Mill Haven	SAM	Small sculpture, Lime Kiln Cadw LB and Mill Haven Rath SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
1.1	Marloes	Archaeology	Trackway (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	St Brides	Archaeology	Field system (Unknown)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	St Brides	Archaeology	Culvert (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Talbenny	Archaeology	Hillfort (Iron Age)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
1.1	Talbenny	Archaeology	Sculpture (Modern)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	St Brides	Archaeology	Hillfort (Iron Age)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	St Brides	Archaeology	Flint working site (Neolithic,Mesolithic)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Talbenny	Archaeology	Findspot (Mesolithic)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Talbenny	Archaeology	Round barrow,Burnt mound (Bronze Age;Prehistoric)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Roch	Archaeology	Trackway (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Brawdy	Archaeology	Field system (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Brawdy	Archaeology	Culvert (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
1.1	Brawdy	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Walton West	Archaeology	Hillfort (Iron Age)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Walton West	Archaeology	Sculpture (Modern)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.1	Haroldston West	Footpath	Coastal Footpath	Population	Local	NAI - Public right of way unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Public right of way unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Public right of way is likely to be partly lost to erosion in this epoch. Therefore a minor negative impact.	
1.1 / 1.2		Historic Parks and Gardens	St Brides Castle	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the extent of the historic park and garden features. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the extent of the historic park and garden features. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the extent of the historic park and garden features. Therefore a major negative impact.	
1.2	St Brides Haven	Listed Building	Lime Kiln at St Brides Haven	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	Recording.
1.2	Nolton	Listed Building	Small village with many archaeological and historic features, including a church, burial grounds, chapel and tower and listed buildings	Historic Environment (Cultural Heritage)	National	NAI - Feature unlikely to be affected by erosion or sea level rise during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion or sea level rise during epoch 2. Therefore a neutral impact.	NAI - Sea level rise may cause damage or loss of the historic feature. Therefore a major negative impact.	
1.2	St Brides	Archaeology	Inscribed stone (Early medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
1.2	St Brides	Archaeology	Chapel (Medieval,Early medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.2	St Brides	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.2	St Brides	Archaeology	Cemetery (Early medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
1.2	Nolton	Slipway and Access	Slipway	Material Assets	Local	NAI - Access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Defences to manage access will be included within this policy. Therefore a minor positive impact.	NAI - Defences to manage access will be included within this policy. Therefore a minor positive impact.	
1.2	Nolton	Beach	Small Sea wall	Population	Local	NAI - Seawall likely to still cause wave reflection increasing issues of flooding and erosion. Therefore a neutral impact.	NAI - Seawall likely to be lost in this epoch to erosion and therefore bay will become safer. Therefore a minor positive impact.	NAI - Seawall likely to have been lost by this epoch to erosion and therefore bay will become safer. Therefore a minor positive impact.	
2	Talbenny	Archaeology	Cottage (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.1	Nolton	Coastal Road	Coastal Road	Material Assets	Local	NAI - Erosion likely to lead to damage and subsequent loss of road and access above Musselwick. Therefore a minor negative impact.	NAI - Erosion likely to lead to damage and subsequent loss of road and access above Musselwick. Therefore a minor negative impact.	NAI - Erosion likely to lead to damage and subsequent loss of road and access above Musselwick. Therefore a minor negative impact.	
2.1	Nolton	Properties	Residential Properties, Pub and Car Park	Population	Regional	HTL - Main road through the beach, slipway and seafront would be maintained, retaining Little Haven as a sustainable community. Therefore a moderate positive impact.	HTL - Main road through the beach, slipway and seafront would be maintained, retaining Little Haven as a sustainable community. Therefore a moderate positive impact.	MR - The use and structure of the lower village need to be re-evaluated to retain the foreshore uses and enable Little Haven as a whole to be maintained. Therefore a minor positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.1	Talbenny	Archaeology	Culm pit (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.1	Talbenny	Archaeology	Cottage (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.2	Haroldston West	Archaeology	Bridge (Post-Medieval,Modern)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.2	Haroldston West	Archaeology	Village (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.11	St David's	Properties	Residential and commercial properties and caravan parks	Population	Regional	MR - Properties unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	MR - Potential risk to properties south of Newgale Bridge from roll back of shingle, however increased flood risk will make these properties untenable in this epoch. The main core of Newgale village would remain protected. Therefore a moderate negative impact.	MR - Café at southern car park, Pinch Cottage, property at car park and several properties at new gale village to northern end of the beach would be at risk from erosion. Therefore a moderate negative impact.	Relocation of commercial business properties.
2.11		Coastal Road	Coastal road and car park	Population	Regional	MR - Access along the road will be maintained by shingle clearance and risk to the car park from erosion is limited. Therefore a moderate positive impact.	MR - During this epoch shingle clearance will not be able to ensure access along the road and that this route would in effect be lost. The car park would need to be moved inland as the shingle bank moved inland. Therefore a moderate negative impact.	MR/NAI - Access along the A487 coastal road would have been lost due to erosion and roll back of the shingle ridge. The car park will need to have been moved to sustain access to the beach. Therefore a moderate negative impact.	Re-location of the car park and the A487 in land.
2.3		Coastal Road	Coastal Road	Material Assets	Regional	NAI - Erosion unlikely to affect this road in epoch 1. Therefore a neutral impact.	NAI - Erosion unlikely to affect this road in epoch 2. Therefore a neutral impact.	NAI - Erosion likely to lead to damage and subsequent loss of road above The Settlands. Therefore a moderate negative impact.	Walton Hill provides alternative access between the villages.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.3	St David's	Properties	Properties	Population	Local	HTL - Properties will be protected from erosion by maintenance of the existing defence line. Sea level rise will cause increased risk of flooding to properties in the south of the village from both the sea and the stream. Therefore a minor positive impact.	HTL - Properties will be protected from erosion by maintenance of the existing defence line. Sea level rise will cause increased risk of flooding to properties in the south of the village from both the sea and the stream. Therefore a minor positive impact.	MR / NAI - Properties will remain protected from erosion with realignment of the Broadhaven Bridge and Haroldsen Bridge areas where there are no properties. This would better manage the risk of flooding from the two streams, however there would still be the risk of tidal flooding the seafront properties. Therefore a minor positive impact.	
2.3	Walton West	Defence post	Cottage (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.4	Whitchurch	Slipway and Access	Slipway	Material Assets	Regional	HTL - Access to the beach would be maintained through sustaining the present alignment of defences that includes the slipway. Therefore a moderate positive impact.	HTL - Access to the beach would be maintained through sustaining the present alignment of defences that includes the slipway. Therefore a moderate positive impact.	MR - Under the proposed realignment the slipway and the adjacent defences would be maintained, sustaining beach access. Therefore a moderate positive impact.	
2.4	Haroldston West	Archaeology	Bridge / Dwelling (Post-Medieval, Modern)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.4	Whitchurch	Listed Building	Broad Haven House Cadw LB	Historic Environment (Cultural Heritage)	National	HTL - Both historic property and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Both historic property and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Both historic property and it's setting maintained as defences at this location are held. Therefore a neutral impact.	
2.5	Walton West	Archaeology	Bridge (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.6	Walton West	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.7	St David's	SAM	Hillfort, Black Point Rath SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
2.7	St David's	Properties	Properties and Druidston Haven Hotel	Population	Local	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
2.7	St David's	Footpath	Coastal Footpath	Population	Regional	NAI - Current footpath route unlikely to be significantly affected by erosion in epoch 1. Therefore a neutral impact.	NAI - Current footpath route may need to be slightly realigned where it meets the beach due to erosion and roll back, however integrity of coastal path will be maintained. Therefore a neutral impact.	NAI - Current footpath route may need to be slightly realigned where it meets the beach due to erosion and roll back, however integrity of coastal path will be maintained. Therefore a neutral impact.	
2.7	Nolton	Archaeology	Findspot (Palaeolithic)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.7	Nolton	Archaeology	Flint scatter (Prehistoric)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.7	St David's	Properties	Properties	Population	Local	HTL - Defences would be maintained protecting properties from erosion. Therefore a neutral impact.	MR - The intent is to maintain the defences protecting the road a properties behind and to allow natural realignment in the northern end of the bay where there are no properties. Therefore a minor positive impact.	MR - The intent is to maintain the defences protecting the road a properties behind and to allow natural realignment in the northern end of the bay where there are no properties. Therefore a minor positive impact.	
2.8	St David's	Listed Building	Nolton Haven Chapel Cadw LB	Historic Environment (Cultural Heritage)	National	HTL - Erosion unlikely to affect this feature in epoch 1. Therefore a neutral impact.	MR - Erosion unlikely to affect this feature in epoch 2. Therefore a neutral impact.	MR - Erosion unlikely to affect this feature in epoch 3. Therefore a neutral impact.	
2.8	St David's	Listed Building	Nolton Chapel	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.8	St David's	Slipway and Access	Slipway	Material Assets	Regional	HTL - Access to the beach would be maintained through sustaining the present alignment of defences that includes the slipway. Therefore a moderate positive impact.	MR - Under the proposed realignment the slipway and the adjacent defences would be maintained, sustaining beach access. Therefore a moderate positive impact.	MR - Under the proposed realignment the slipway and the adjacent defences would be maintained, sustaining beach access. Therefore a moderate positive impact.	
2.8	Nolton	Archaeology	Tank trap / Lime kiln (Modern, Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
2.8	St David's	Car Park	Road and Car Park	Population	Regional	HTL - Defences are maintained protecting the roads from erosion and sustaining access. If unprotected defences would begin to fail but road would not yet have been lost. Therefore a neutral impact.	MR - Under the proposed realignment the roads remain protected maintaining access. Therefore a moderate positive impact.	MR - Under the proposed realignment the roads remain protected maintaining access. Therefore a moderate positive impact.	
2.9	Llanrian	Footpath	Coastal Path	Population	National	NAI - Some sections of the current path may be lost to erosion. Therefore a major negative impact.	NAI - Some sections of the current path may be lost to erosion. Therefore a major negative impact.	NAI - Some sections of the current path may be lost to erosion. Therefore a major negative impact.	Realigned of some of the route. There is adequate space for this to occur.
2.9	Llanrian	Properties	Cottages situated on a cliff to the south of the beach	Population	Local	NAI - Properties unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Properties unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Properties unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
2.9	Mathry	Listed Building	Colliery remains, Lime Kiln Cadw LB	Historic Environment (Cultural Heritage)	National	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
3.1	Mathry	SAM	Dinas Fach Defended enclosure SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.1	Granston	Listed Building	Lime kiln and listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Historic features will remain protected and are not at risk from tidal flooding. The lime kilns are currently undefended and the present day occasional flooding will become more frequent. Therefore a minor negative impact.	HTL - Historic features will remain protected and are not at risk from tidal flooding. The lime kilns are currently undefended and the present day occasional flooding will become more frequent. Therefore a minor negative impact.	HTL/MR - Historic features will remain protected with the realignment in Lower Solva and are not at risk from tidal flooding. The lime kilns are currently undefended and the present day occasional flooding will become more frequent. Therefore a minor negative impact.	
3.1	Granston	Properties	Residential and commercial Properties and Pubs	Population	Regional	HTL - Defences on the northern side of the harbour will be maintained preventing erosion of the coastal slope protecting Upper Solva and the quayside. Tidal flood risk to lower Solva would increase due to SLR. If not maintained the current defences would not yet have failed. Therefore a neutral impact.	HTL - Defences on the northern side of the harbour will be maintained preventing erosion of the coastal slope protecting Upper Solva and the quayside. Tidal flood risk to lower Solva would increase due to SLR. Therefore a moderate positive impact.	HTL - Defences on the northern side of the harbour will be maintained preventing erosion of the coastal slope protecting Upper Solva and the quayside. Therefore a moderate positive impact.	
3.1	Y Gribin, Solfach Isaf/lower Solva	Listed Building	Limekiln on south side of estuary	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	Recording.
3.1	St David's	SAM	Porth y Rhaw camp SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	Dinas	Protected Wreck	Wreck	Historic Environment (Cultural Heritage)	National	NAI - Wreck site will remain undisturbed, and continue to develop naturally. Therefore a neutral impact.	NAI - Wreck site will remain undisturbed, and continue to develop naturally. Therefore a neutral impact.	NAI - Wreck site will remain undisturbed, and continue to develop naturally. Therefore a neutral impact.	
3.1	NEWPORT	SAM	Caerfai Camp SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.1	Newport	Access	Access to beach	Population	Local	NAI - Current footpath route may need to be slightly realigned where it meets the beach due to erosion and roll back, however integrity of coastal path will be maintained. Therefore a neutral impact.	NAI - Current footpath route may need to be slightly realigned where it meets the beach due to erosion and roll back, however integrity of coastal path will be maintained. Therefore a neutral impact.	NAI - Current footpath route may need to be slightly realigned where it meets the beach due to erosion and roll back, however integrity of coastal path will be maintained. Therefore a neutral impact.	
3.1		Caravan/Holiday Park/Camp Site	Caravan Park	Population	Local	NAI - Erosion unlikely to affect caravan and camping facilities in epoch 1. Therefore a neutral impact.	NAI - Erosion unlikely to affect caravan and camping facilities in epoch 2. Therefore a neutral impact.	NAI - Erosion unlikely to affect caravan and camping facilities in epoch 3. Therefore a neutral impact.	
3.1	Nevern	Coastal Road	Iron Age fort and Neolithic finds	Historic Environment (Cultural Heritage)	National	NAI - The feature would not be affected by SMP policy. Therefore a neutral impact.	NAI - The feature would not be affected by SMP policy. Therefore a neutral impact.	NAI - The feature would not be affected by SMP policy. Therefore a neutral impact.	
3.1	Nevern	Listed Building	Many listed religious buildings	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to affect listed buildings in epoch 1. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 2. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 3. Therefore a neutral impact.	
3.1	Fishguard	Listed Building	Grade 2 Cadw LB	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to affect listed buildings in epoch 1. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 2. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 3. Therefore a neutral impact.	
3.1	Fishguard and Goodwick	Listed Building	small disused copper mine, remains perched on the edge of the cliff, is being eroded	Historic Environment (Cultural Heritage)	Local	NAI - Erosion unlikely to affect listed buildings in epoch 1. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 2. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 3. Therefore a neutral impact.	
3.1	Fishguard and Goodwick	SAM	Castell Heinif SAM promontory fort	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	Fishguard	Footpath	Footpath to beach	Population	Local	NAI - Footpath is potentially at risk from erosion. Therefore a minor negative impact.	NAI - Footpath is potentially at risk from erosion. Therefore a minor negative impact.	NAI - Footpath is potentially at risk from erosion. Therefore a minor negative impact.	
3.1	Dinas	SAM	Hut circles and Ancient Enclosures NW of Carn Illidi	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.1	St Dogmaels Rural	SAM	St David's Head Camp SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	St Dogmaels Rural	Listed Building	Tower, Cadw Listed Building	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to affect listed buildings in epoch 1. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 2. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 3. Therefore a neutral impact.	
3.1	St Dogmaels Rural	SAM	Castell Coch Promontory fort SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	St Dogmaels Rural	SAM	Caerau Promontory Forts	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	Verwig	Listed Building	Navigation aid	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to affect listed buildings in epoch 1. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 2. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed buildings in epoch 3. Therefore a neutral impact.	
3.10	Penbryn	SAM	Porthgain quarry SAM	Historic Environment (Cultural Heritage)	National	HTL - Defences on the western side of the harbour are maintained protecting the historic site, although without intervention it would not be lost in this epoch as the existing defences would not yet have failed. Therefore a neutral impact.	HTL - Defences on the western side of the harbour are maintained protecting the historic site from deterioration. Therefore a major positive impact.	HTL - Defences on the western side of the harbour are maintained protecting the historic site from deterioration and erosion from the coastal slope. Therefore a major positive impact.	
3.10	Penbryn	Listed Building	Cadw Listed Buildings (Ty Mawr and Limekiln adjacent to Kiln house)	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected by flooding or erosion in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected by flooding or erosion in this epoch. Therefore a neutral impact.	HTL - In extreme conditions there may be some flood risk to a listed building but this is unlikely. Therefore a neutral impact.	
3.10	Llandyssiliogogo	Properties	Properties and harbour	Population	Local	HTL - Properties and harbour remain protected. Therefore a neutral impact.	HTL - Properties and harbour remain protected. Therefore a minor positive impact.	HTL - Properties and harbour remain protected. Therefore a minor positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.10	Llanllwchaiarn	Listed Building	Heritage site, Listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Defences maintained, retaining the historic features and their setting in the harbour. If left the existing defences would not yet have failed. Therefore a neutral impact.	HTL - Defences maintained, retaining the historic features and their setting in the harbour. Therefore a major positive impact.	HTL - Defences maintained, retaining the historic features and their setting in the harbour. Therefore a major positive impact.	
3.1	Llanllwchaiarn	SAM	Aberfelin Mill SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	Llanllwchaiarn	Properties	Footpath, Road and Residential Properties	Population	Regional	NAI - Erosion is unlikely to affect any properties in epoch 1, however the road is very close to the edge of the cliffs and is at risk. Therefore a neutral impact.	NAI - Properties are likely to be at greater risk from erosion of the cliffs, however there is uncertainty regarding this. It is likely that the road to the south would either have been damaged or lost as the cliffs retreat there. Therefore a moderate negative impact.	NAI - Properties are likely to be at greater risk from erosion of the cliffs, however there is uncertainty regarding this. It is likely that the road to the south would either have been damaged or lost as the cliffs retreat there. Therefore a moderate negative impact.	Relocation of properties.
3.1	Granston	Archaeology	Boat House (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
3.1	St David's	Archaeology	Quarry (Post-Medieval, Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
3.1	St David's	Archaeology	Findspot (Prehistoric)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
3.1	Llanllwchaiarn	SAM	Promontory Fort SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.11	Llandyssiliogogo	Listed Building	3 Cadw listed buildings (Lime kiln, Abercastle mill and phone box)	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected by flooding in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected by flooding in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected by flooding in this epoch. Therefore a neutral impact.	
3.11		Slipway and Access	Slipway and access road	Material Assets	Local	HTL - The retaining wall to the boat hard will be maintained preventing erosion and sustaining access. If the wall was not maintained and due to the low energy environment it is unlikely that access to the beach would be lost in this epoch. Therefore a neutral impact.	MR - The current position of the shoreline is intended to be retreated allowing natural roll back of the beach. This is lead to loss of the present access to the beach, therefore fro access to be maintained it would need to be reconfigured. Therefore a minor negative impact.	MR - The current position of the shoreline is intended to be retreated allowing natural roll back of the beach. This is lead to loss of the present access to the beach, therefore fro access to be maintained it would need to be reconfigured. Therefore a minor negative impact.	
3.11	Llanina	Properties	Residential Properties	Population	Local	HTL - Retaining wall to boat hard will prevent erosion from undermining coastal slopes, protecting properties above the beach. If not maintained erosion would not affect properties in this epoch. Therefore a neutral impact.	MR - Within the policy of realignment there would be provision for protection to the coastal slope to safeguard property. Therefore a minor positive impact.	MR - Within the policy of realignment there would be provision for protection to the coastal slope to safeguard property. Therefore a minor positive impact.	
3.1	Llanarth	SAM	Castell Coch Promontory Fort (on Penmorfa) SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	Llanddewi Aberarth Upper	SAM	Defended Enclosure SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	Llansantffraid	SAM	Monument	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	Llansantffraid	SAM	Dinas Mawr Camp SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause loss of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.1	Llanychaearn	Listed Building	Military buildings	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.1	Llanychaearn	Listed Building	Lighthouse and listed cottages Cadw LBs	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	
3.1	Aberystwyth	Listed Building	Chapel	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to cause loss of the listed building. Therefore a neutral impact.	NAI - Erosion unlikely to cause loss of the listed building. Therefore a neutral impact.	NAI - Erosion unlikely to cause loss of the listed building. Therefore a neutral impact.	
3.1		Listed Building	Commemorative Monument	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	NAI - Erosion unlikely to cause loss of the historic feature. Therefore a neutral impact.	
3.1		Coastal Road	Coastal Road	Material Assets	Local	NAI - Road unlikely to be at risk from erosion of the cliffs in this epoch. Therefore a neutral impact.	NAI - Road may be at risk from erosion of the cliffs. Therefore a minor negative impact.	NAI - Road may be at risk from erosion of the cliffs. Therefore a minor negative impact.	
3.11		SAM	Ynys y Castell SAM hillfort	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
3.12		Heritage Coast	submerged forest	Historic Environment (Cultural Heritage)	Local	NAI - Site will continue to deteriorate due to erosion and will be progressively submerged by SLR. Therefore a moderate negative impact.	NAI - Site will continue to deteriorate due to erosion and will be progressively submerged by SLR. Therefore a moderate negative impact.	NAI - Site will continue to deteriorate due to erosion and will be progressively submerged by SLR. Therefore a moderate negative impact.	
3.12		Footpath	Coastal path and pedestrian access	Population	Local	NAI - Erosion unlikely to affect coastal path in epoch 1. Therefore a neutral impact.	NAI - Erosion likely to cause loss of parts of the coastal path. Therefore a major negative impact.	NAI - Erosion likely to cause loss of parts of the coastal path. Therefore a major negative impact.	Realignment of the route inland.
3.12		Listed Building	Submarine Listening station	Historic Environment (Cultural Heritage)	National	NAI - Historic feature unlikely to be affected by sea level rise or erosion. Therefore a neutral impact.	NAI - Historic feature unlikely to be affected by sea level rise but may be lost due to erosion and roll back of the beach. Therefore a major negative impact.	NAI - Historic feature at risk from both erosion and sea level rise. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.4	St David's	Archaeology	Harbour (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archlogical site and it's setting maintained as defences are held. Therefore a neutral impact .	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
3.3		SAM	War memorial, settlement SAM	Historic Environment (Cultural Heritage)	National	HTL - Historic features will remain protected and are not at risk from tidal flooding. Erosion is unlikely to affect the majority of the historic features. The lime kilns are currently undefended and the present day occasional flooding will become more frequent. Therefore a minor negative impact.	HTL - Historic features will remain protected and are not at risk from tidal flooding. Erosion is unlikely to affect the majority of the historic features. The lime kilns are currently undefended and the present day occasional flooding will become more frequent. Therefore a minor negative impact.	HTL - Historic features will remain protected and are not at risk from tidal flooding. Erosion is unlikely to affect the majority of the historic features. The lime kilns are currently undefended and the present day occasional flooding will become more frequent. Therefore a minor negative impact.	
3.5		Slipway and Access	Slipway and access road	Material Assets	Local	HTL - Outer quay and slipways maintained. Access road not at risk of flooding. Therefore a neutral impact.	HTL/NAI - Assuming local funding is found to maintain outer quay slipways would be maintained. Access road not at risk of flooding. Therefore a minor positive impact.	HTL/NAI - Assuming local funding is found to maintain outer quay slipways would be maintained. Access road at risk of regular flooding. Therefore a minor negative impact.	
3.5		Listed Building	Limekilns, quarry, inner quay, footbridge, post-medieval, buildings	Historic Environment (Cultural Heritage)	National	HTL - Erosion unlikely to affect listed buildings. Therefore a neutral impact.	HTL - Erosion unlikely to affect listed buildings. Therefore a neutral impact.	HTL - Erosion unlikely to affect listed buildings. Therefore a neutral impact.	
3.6		Lifeboat/ Lifeguard Station	Lifeboat Station	Material Assets	Regional	NAI - However management of the RNLI Station would be excluded from this policy and maintained. With no intervention the lifeboat station would not be affected in this epoch. Therefore a neutral impact.	NAI - However management of the RNLI Station would be excluded from this policy and maintained. Therefore a moderate positive impact.	NAI - However management of the RNLI Station would be excluded from this policy and maintained. Therefore a moderate positive impact.	
3.6		Listed Building	Many listed religious buildings	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings on the cliffs are unlikely to be affected by erosion, and the lifeboat stations will remain protected. Therefore a neutral impact.	NAI - Listed buildings on the cliffs are unlikely to be affected by erosion, and the lifeboat stations will remain protected as this policy would not preclude management of the RNLI Station and ferry service subject to normal approvals. Therefore a neutral impact.	NAI - Listed buildings on the cliffs are unlikely to be affected by erosion, and the lifeboat stations will remain protected as this policy would not preclude management of the RNLI Station and ferry service subject to normal approvals. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.8		Heritage Coast	Submerged forest	Historic Environment (Cultural Heritage)	Local	HTL - Site is located on the foreshore and therefore will continue to deteriorate due to erosion and will be progressively submerged by SLR. Therefore a moderate negative impact.	MR - Site is located on the foreshore and therefore will continue to deteriorate due to erosion and will be progressively submerged by SLR. Therefore a moderate negative impact.	MR - Site is located on the foreshore and therefore will continue to deteriorate due to erosion and will be progressively submerged by SLR. Therefore a moderate negative impact.	
3.8	St David's	Archaeology	Findspot (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
3.8		Beach	Beach and coastal path and car park	Population	Regional	HTL - Defences that currently protect the car park and rescue station will be maintained allowing access to and use of the beach. If the defences were not maintained there would be relatively little impact on the car park. Therefore a neutral impact.	MR - This policy will involve reconfiguration of the car park and beach access with the aim on maintaining the natural attractiveness and use of the beach. Therefore a moderate positive impact.	MR - This policy will involve reconfiguration of the car park and beach access with the aim on maintaining the natural attractiveness and use of the beach. Therefore a moderate positive impact.	
3.8		Lifeboat/ Lifeguard Station	Lifeguard Station	Material Assets	Local	HTL - Defences that currently protect the and rescue station will be maintained. Therefore a minor positive impact.	MR - There would be no specific line defined for future defence, and as such, although the policy intent would be Managed Realignment, the aim would be one of progressive retreat and adaptation of use of the area. The function of the lifeboat station is unlikely to be lost but its positioning would need to be realigned. Therefore a neutral impact.	MR - There would be no specific line defined for future defence, and as such, although the policy intent would be Managed Realignment, the aim would be one of progressive retreat and adaptation of use of the area. The function of the lifeboat station is unlikely to be lost but its positioning would need to be realigned. Therefore a neutral impact.	
3.8		SAM	St Patrick's Chapel SAM	Historic Environment (Cultural Heritage)	National	HTL - The historic site will remain protected, although even under a policy of no intervention would not be affected in this epoch. Therefore a neutral impact.	MR - Under this plan there is the intent to retain some protection for this historic site a significant proportion of which would otherwise be lost to erosion. Therefore a major positive impact.	MR - Under this plan there is the intent to retain some protection for this historic site a significant proportion of which would otherwise be lost to erosion. Therefore a major positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.9		Coastal Road	Coastal Road and car park	Population	Regional	MR - In controlling the retreat of the shoreline the beach and access to it will be maintained. Therefore a moderate positive impact.	MR - In controlling the retreat of the shoreline the beach and access to it will be maintained. Therefore a moderate positive impact.	MR - In controlling the retreat of the shoreline the beach and access to it will be maintained. Therefore a moderate positive impact.	
3.9	Llanrian	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
3.9		Properties	Properties	Population	Local	MR - The properties are unlikely to be at risk from either erosion or flooding in this epoch. Therefore a neutral impact.	MR - The properties are unlikely to be at risk from either erosion or flooding in this epoch. Therefore a neutral impact.	MR - The properties are unlikely to be at risk from either erosion or flooding in this epoch. Therefore a neutral impact.	
4.12		Listed Building	St brynach church Cadw Listed Buildings	Historic Environment (Cultural Heritage)	National	HTL - The defences protecting this historic site will be maintained. Given that the wall protecting the feature would be unlikely to fail in this epoch if the policy was NAI the impact is assessed as neutral .	HTL - The defences protecting this historic site will be maintained. Therefore a major positive impact.	HTL - The defences protecting this historic site will be maintained. Therefore a major positive impact.	
4.12		SAM	Scheduled ancient monument, Church	Historic Environment (Cultural Heritage)	National	HTL - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	
4.12		Properties	Residential property	Population	Local	HTL - The defences protecting the village will be maintained preventing loss of property and the character of the place. If not maintained the current defences would not fail in this epoch. Therefore a neutral impact.	HTL - The defences protecting the village will be maintained preventing loss of property and the character of the place. Therefore a minor positive impact.	HTL - The defences protecting the village will be maintained preventing loss of property and the character of the place. Therefore a minor positive impact.	
4.13		Footpath	Coastal Path	Population	Regional	NAI - The coastal path is unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	NAI - The coastal path in its current alignment may be affected by erosion in this epoch. Therefore a major negative impact.	NAI - It is likely that erosion of the beach and roll back will lead to loss of the current alignment of the coastal path. Therefore a major negative impact.	Realignment of the route inland.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.14		Slipway and Access	Slipway located seaward of TyCanol Farm	Material Assets	Local	NAI - Slipway unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion is likely to lead to the loss of the slipway as a functioning access point for boating uses. Therefore a minor negative impact.	
4.15		Properties	Residential Properties	Population	Regional	MR/HTL - Behind the rock outcrop at Parrog the realignment would still allow private funding of defences to properties. To the east and along the headland the defences will be maintained. If not maintained the current defence would deteriorate over this epoch but not fail to the extent that properties are at risk from erosion. Therefore a neutral impact.	MR/HTL - Behind the rock outcrop at Parrog the realignment would still allow private funding of defences to properties. To the east and along the headland the defences will be maintained. Therefore a moderate positive impact.	MR - Behind the rock outcrop at Parrog the realignment would still allow private funding of defences to properties, however this may not be possible. The proposed realignment for the rest of the frontage is in response to the defences becoming unsustainable, however its extent is not known. It is likely that this will lead to the loss of some properties, possibly the Sailing Club. Therefore a moderate negative impact.	Re-location of the sailing club and monitoring of erosion and properties at Feidr Brenin.
4.15		Slipway and Access	Yacht Club and Slipway	Material Assets	Regional	HTL - Defences would be maintained ensuring access to the water and continued use of the sailing club. Therefore a moderate positive impact.	HTL - Defences would be maintained ensuring access to the water and continued use of the sailing club. Therefore a moderate positive impact.	MR - As the defences become unsustainable would involve reconfiguration of the sailing club and slipway access. Therefore a moderate positive impact.	
4.15		Listed Building	Cadw Listed Buildings (Ty Mawr and Limekiln adjacent to Kilnhouse)	Historic Environment (Cultural Heritage)	National	HTL - As defences are maintained the listed buildings will remain protected. The current defences would deteriorate over this epoch if the policy was NAI but would not fail to the extent that the listed buildings are at risk. The impact is therefore assessed as neutral.	HTL - As defences are maintained the listed buildings will remain protected. Therefore a major positive impact.	MR - realignment of this area may impact upon the listed buildings, certainly their setting will be altered. Therefore a major negative impact.	Recording.
4.16		SAM	The old castle SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be lost due to SLR or erosion in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be lost due to SLR or erosion in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be lost due to SLR or erosion in this epoch, only at risk under 1:2yr event with 2m SLR. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.16		Properties	Residential Properties	Population	Local	NAI - The properties are unlikely to be at risk from erosion or SLR in this epoch. Therefore a neutral impact.	NAI - One property (Riverslea) may be at risk from erosion in this epoch. This may require localised protection. Therefore a minor negative impact.	NAI - One property (Riverslea) may be at risk from erosion in this epoch. This may require localised protection. Therefore a minor negative impact.	
4.17		Car Park	Car Park and Golf course	Population	Regional	HTL - The revetment will be maintained protecting the car park for this epoch. If not maintained the revetment would not fail in this epoch. Therefore a neutral impact.	MR - The impact upon the car park depends upon the extent of realignment, which is reliant on the natural evolution of The Bennet, but it is likely some of the car park would be affected. Therefore a moderate negative impact.	NAI - It is likely the car park would be lost if not realigned. However, given the importance of the area it is likely the function of the car park would still remain as it was realigned inland. Therefore a neutral impact.	Re-alignment of car par inland.
4.2		Harbour / Marina	Harbour	Material Assets	National	HTL - All defences in the harbour including the breakwaters would be maintained, allowing continued use of the harbour. Therefore a major positive impact.	HTL - All defences in the harbour including the breakwaters would be maintained, allowing continued use of the harbour. Therefore a major positive impact.	HTL/AL - All defences in the harbour including the breakwaters would be maintained, allowing continued use of the harbour. There is potential for advancing the line within the current harbour limits which would increase its economic value. Therefore a major positive impact.	
4.2		Railway	Road and Rail	Material Assets	National	HTL - Maintenance of the current defences within the harbour and to The Parrog will ensure access is maintained. With no intervention the defences that currently protect the road and rail access to the harbour would not have failed, therefore still protecting the access routes from erosion. Flooding of the road access across the Parrog would increase in regularity, but not significantly limiting access. Therefore a neutral impact.	HTL/MR - Defences within the harbour will be maintained protecting the railway line and roads there. To combat SLR and increased flooding to The Parrog, the road would be rebuilt as a bridge across Godwick Moor, opening this area up to tidal inundation. Therefore a major positive impact.	HTL/AL/MR - Defences within the harbour will be maintained protecting the railway line and roads there. To combat SLR and increased flooding to The Parrog, the road would be rebuilt as a bridge across Godwick Moor, opening this area up to tidal inundation. Therefore a major positive impact.	
4.2		Properties	Goodwick Town- Properties	Population	Regional	HTL - The operation of the port would be maintained and properties would be protected. Therefore a moderate positive impact.	HTL/MR - The operation of the port would be maintained and properties would be protected. Therefore a moderate positive impact.	HTL/MR - The operation of the port would be maintained and properties would be protected. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.2		Hotel	Fishguard Bay Hotel	Historic Environment (Cultural Heritage)	National	HTL - Erosion unlikely to affect hotel in this epoch. Therefore a neutral impact.	HTL - Erosion unlikely to affect hotel in this epoch. Therefore a neutral impact.	HTL/AL - Erosion unlikely to affect hotel in this epoch. Therefore a neutral impact.	
4.3		Listed Building	Bridge Cottages Cadw listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected by SLR in this epoch. Therefore a neutral impact.	MR - Listed buildings may be affected by flooding in extreme events, but unlikely to be lost. Therefore a neutral impact.	MR - Listed buildings below MHWS tide level, and so are likely to be lost in this epoch. Therefore a major negative impact.	Recording.
4.3	Fishguard and Goodwick	Archaeology	Defence post (Modern)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
4.4		Properties	Residential Properties	Population	Local	NAI - Erosion unlikely to affect properties in this epoch. Therefore a neutral impact.	NAI - Erosion unlikely to affect properties in this epoch. Therefore a neutral impact.	NAI - Erosion unlikely to affect properties in this epoch. Therefore a neutral impact.	
4.4		Coastal Road	Coastal Road	Material Assets	Regional	NAI - Erosion unlikely to affect road in this epoch. Therefore a neutral impact.	NAI - Erosion unlikely to affect road in this epoch, however failure at some locations could cause localised damage. Therefore a minor negative impact.	Increasing chance of accelerated erosion due to SLR affecting the road and preventing access, however there is considerable uncertainty. Therefore a moderate negative impact.	Realignment of road
4.4	Fishguard and Goodwick	Archaeology	Coastguard lookout / Quarry	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
4.4	Fishguard	Archaeology	Dwelling	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.6		Properties	Residential property	Population	Regional	HTL - The properties would be protected from erosion by maintenance of the defences which would also maintain the character of the village through sustaining the road and quayside. Without protection properties are unlikely to be at risk from erosion or tidal flooding. Therefore a neutral impact.	HTL - The properties would be protected from erosion by maintenance of the defences which would also maintain the character of the village through sustaining the road and quayside. Therefore a moderate positive impact.	MR - The realignment of the defences would still include defence to the properties. In addition the character would be maintained. Therefore a moderate positive impact.	
4.6		Coastal Road	Coastal Road	Material Assets	Regional	HTL - The coastal roads will remain protected maintaining access to the village. Without intervention access would be unlikely to be significantly affected in this epoch. Therefore a neutral impact.	HTL - The coastal roads will remain protected maintaining access to the village. Therefore a moderate positive impact.	HTL/MR - The coastal road to the south of the harbour will remain protected. It is unlikely that the current alignment of river entrance will remain however access to the properties will be maintained. Therefore a moderate positive impact.	
4.6		Listed Building	Many Cadw listed buildings	Historic Environment (Cultural Heritage)	National	HTL - The quayside, bridge and listed properties will remain protected. Therefore a major positive impact.	HTL - The quayside, bridge and listed properties will remain protected. Therefore a major positive impact.	HTL/MR - The quayside, bridge and listed properties will remain protected, while the entrance to the river is reconfigured downstream of the bridge. Therefore a major positive impact.	
4.8		Listed Building	Old Fort	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	Recording.
4.8		SAM	Old Fort SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.9		Caravan/Holiday Park/Camp Site	Caravan Park	Population	Regional	NAI - Erosion is unlikely to lead to any loss of the function of the caravan park in this epoch. Therefore a neutral impact.	NAI - The buildings at the northern extent of the caravan park may be at risk from erosion along with some static caravan plots located close to the cliff edge. This depends on the response of the erosion rates to SLR. However overall function of the site will be maintained. Therefore a neutral impact.	NAI - The buildings at the northern extent of the caravan park will be at increased risk from erosion along with some static caravan plots located close to the cliff edge. This depends on the response of the erosion rates to SLR. However overall function of the site will be maintained. Therefore a neutral impact.	
4.9	Fishguard	Archaeology	Slate quarry (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
4.9	Dinas	Archaeology	Coastal battery (Modern)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
4.9	Dinas	Archaeology /SAM	Hillfort (DINAS ISLAND CASTELL (WEST))	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
4.9		Car Park	Car Park, slipway, road	Population	Local	HTL - Maintained of the current defence in this epoch will sustain access to the beach. If not maintained defences would not have failed in this epoch. Therefore a neutral impact.	NAI - The defence will deteriorate and start to fail in this epoch however access to the beach is unlikely to be significantly affected. The car park area including the slipway and road to the north of this would be exposed to erosion. Therefore a minor negative impact.	NAI - The defence will have failed in this epoch and without reconfiguration of the road and car park access to the beach will be reduced. The majority of the car park and the road directly behind the beach are likely to have been lost through erosion. Therefore a minor negative impact.	
4.9	Newport	Archaeology	Harbour (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.9	Newport	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.			

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.15	Newport	Archaeology	Warehouse (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
4.15	Newport	Archaeology	Shipyards / Port (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
4.15	Newport	Archaeology/SAM	Ondara House	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
4.15	Newport	Archaeology	Cottage (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
4.15	Newport Parrog	Listed Building	Ondara House	Historic Environment (Cultural Heritage)	National	HTL - Historic site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Historic site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
4.15	Newport Parrog	Listed Building	Small lime Kiln (Parrog Carpark)	Historic Environment (Cultural Heritage)	National	HTL - Historic site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Historic site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	Recording.
4.15	Newport Parrog	Listed Building	Kiln Cottage on foreshore	Historic Environment (Cultural Heritage)	National	HTL - Historic site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Historic site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	Recording.
4.16	Nevern	Archaeology	Storehouse, Dwelling, Jetty (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.1	Haroldston West	SAM	Promontory Fort SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
5.1	Walton West	Coastal Road	Coastal Road	Material Assets	Regional	NAI - Road is located close to top of vegetated cliffs, which are stable and eroding very slowly, unlikely to impact on the road in this epoch. Therefore a neutral impact.	NAI - Road is located close to top of vegetated cliffs, which are stable and eroding very slowly, unlikely to impact on the road in this epoch. Therefore a neutral impact.	NAI - Road is located close to top of vegetated cliffs, which are stable and eroding very slowly, unlikely to impact on the road in this epoch. Therefore a neutral impact.	
5.1	St Dogmaels Rural	Archaeology	Findspot (Roman,Iron Age)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
5.1	St Dogmaels Rural	Archaeology	Chapel (Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
5.1	St Dogmaels Rural	Archaeology	Coastguard lookout (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
5.1	Walton West	SAM	Promontory Fort SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
5.3	Cardigan	Archaeology	Quay (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
5.10	Walton West	Listed Building	Cadw listed buildings	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be lost due to SLR or erosion in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be lost due to SLR or erosion in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be lost due to SLR or erosion in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.10	Walton West	Heritage Coast	Special Landscape Area	Historic Environment (Cultural Heritage)	National	NAI - The NAI policy for the St Dogmael's frontage is not expected to result in loss of or alteration to the character of the Conservation Area. Therefore a neutral impact.	NAI - The NAI policy for the St Dogmael's frontage is not expected to result in loss of or alteration to the character of the Conservation Area. Therefore a neutral impact.	NAI - The NAI policy for the St Dogmael's frontage is not expected to result in loss of or alteration to the character of the Conservation Area. Therefore a neutral impact.	
5.12	Nolton	Properties	Properties to the South of the river	Population	Regional	HTL - Risk of loss of property from flooding is low and erosion protection will be maintained. Therefore a neutral impact.	HTL - Increased risk of flooding will lead to damage to several industrial properties along the waterfront in more extreme events. Erosion protection will be maintained. Therefore a moderate negative impact.	HTL - Regular flooding of the properties on the waterfront is likely to occur in this epoch. Erosion protection will be maintained. Therefore a moderate negative impact.	a) early warning systems for flooding. b) re-location of commercial properties.
5.12	Mathry	Listed Building	Many listed buildings and SAM	Historic Environment (Cultural Heritage)	National	HTL - Current flood defences would be maintained and improved if necessary protecting the listed buildings. If not improved the present defences would still protect the features under NAI in this epoch. The impact is therefore assessed as neutral.	HTL - Current flood defences would be maintained and improved if necessary protecting the listed buildings. Therefore a major positive impact.	HTL - Current flood defences would be maintained and improved if necessary protecting the listed buildings. Therefore a major positive impact.	
5.15	St David's	SAM	religious features, mortuary, chapel	Historic Environment (Cultural Heritage)	National	NAI - Erosion or SLR are unlikely to affect the listed building in this epoch. Therefore a neutral impact.	NAI - Erosion or SLR are unlikely to affect the listed building in this epoch. Therefore a neutral impact.	NAI - Erosion likely to start to damage the listed building as the coastal slope behind Mwnt beach is removed. Therefore a major negative impact.	Excavation and recording.
5.15	Newport	Coastal Road	Road above Mwnt beach	Material Assets	Local	NAI - Erosion may start to impact on the road as the cliffs retreat, this depends upon the acceleration of erosion rates due to SLR. Therefore a minor negative impact.	NAI - Erosion will have led to loss of the road above the beach preventing access to the car park, chapel and caravan park. Therefore a minor negative impact.	NAI - Erosion will have led to loss of the road above the beach preventing access to the car park, chapel and caravan park. Therefore a minor negative impact.	
5.15	Verwig	Archaeology	Quarry (Post-Medieval, Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.15	NEWPORT	Access	Beach, concrete steps and sleeper bridge	Population	Local	NAI - Access steps may be lost near the base of the slope due to rapid erosion of the cliffs. Therefore a minor negative impact.	NAI - Further loss of the current access steps will occur due to the rapidly retreating cliffs, sustaining access to the beach will be problematic. Therefore a minor negative impact.	NAI - Further loss of the current access steps will occur due to the rapidly retreating cliffs, sustaining access to the beach will be problematic. Therefore a minor negative impact.	
5.2		SAM	Scheduled ancient monument, Church	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	
5.2	Newport	Listed Building	Rocket apparatus store	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to affect listed building in epoch 1. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed building in epoch 2. Therefore a neutral impact.	NAI - Erosion unlikely to affect listed building in epoch 3. Therefore a neutral impact.	
5.3		Car Park	Car Park	Population	National	MR - Erosion or SLR are unlikely to affect the car park in this epoch. Therefore a neutral impact.	MR - Erosion or SLR are unlikely to affect the car park in this epoch. Therefore a neutral impact.	MR - Erosion is unlikely to affect the car park in this epoch. SLR may lead to flooding in extreme events. Therefore a minor negative impact.	
5.3	NEWPORT	Lifeboat/ Lifeguard Station	RNLI Station	Material Assets	National	MR - The proposed realignment included the objective to maintain the lifeboat station. With no intervention erosion and rollback of the dunes are unlikely to affect the lifeboat station in this epoch. Therefore a neutral impact.	MR - The proposed realignment included the objective to maintain the lifeboat station. Therefore a major positive impact.	MR - The proposed realignment included the objective to maintain the lifeboat station. Therefore a major positive impact.	
5.3		Properties	Residential Properties	Population	Local	NAI - Properties unlikely to be lost due to erosion or SLR in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be lost due to erosion or SLR in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be lost due to erosion or SLR in this epoch. Therefore a neutral impact.	
5.3	Newport	Coastal Road	Coastal Road	Material Assets	Regional	NAI - Erosion unlikely to result in damage to road in this epoch, the increased risk of flooding from SLR will not significantly affect access. Therefore a neutral impact.	NAI - Erosion unlikely to result in damage to road in this epoch, increased risk of flooding from SLR will cause some disruption of access. Therefore a minor negative impact.	NAI - Erosion unlikely to result in damage to road in this epoch, SLR will cause regular flooding of the road disrupting access for properties to the north. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.3		Coastal Road	Coastal Road	Material Assets	Regional	HTL - The retaining wall will be maintained sustaining the road and access. Without intervention access will still be possible in this epoch as the road wall will remain and the impact of tidal flooding will be limited. Therefore a neutral impact .	HTL - The retaining wall will be maintained sustaining the road and access. Therefore a moderate positive impact.	MR - Under this policy the road would be maintained, however access would be periodically disrupted by tidal flooding near Nant-y-ferwig. Therefore a minor negative impact.	
5.3	NEWPORT	Properties	Properties	Population	Local	HTL - Properties unlikely to be lost due to erosion or SLR in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be lost due to erosion or SLR in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be lost due to erosion or SLR in this epoch. Therefore a neutral impact.	
5.3	Newport	Caravan/Holiday Park/Camp Site	Caravan Park	Population	Regional	MR - None of the caravan park is likely to be lost in this epoch. Therefore a neutral impact.	MR - There may be need for adjustment of the caravan park to accommodate the realignment, however its function and setting would essentially be maintained. Therefore a moderate positive impact.	MR - There may be need for adjustment of the caravan park to accommodate the realignment, however its function and setting would essentially be maintained. Therefore a moderate positive impact.	
5.4	Newport	Slipway and Access	Slipways and access to estuary	Material Assets	Local	NAI - The two slipways on the western side of the estuary north of St Dogmaels are unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - The slipways may start to be affected by SLR causing accelerated erosion within the estuary. Therefore a minor negative impact.	NAI - Slipways likely to have been lost due to a combination of SLR and erosion of the estuary banks. Therefore a minor negative impact.	
5.4	Newport	Properties	Residential property	Population	Regional	HTL/NAI - Properties unlikely to be lost due to erosion or SLR in this epoch. Therefore a neutral impact.	HTL/NAI - Some properties in north St Dogmaels may be affected by erosion, but the majority will not. As only a few properties would be affected the impact is assessed as a minor negative impact.	HTL/NAI - Some properties in north St Dogmaels may be affected by erosion, but the majority will not. As only a few properties would be affected the impact is assessed as a minor negative impact.	
5.4	Newport	Coastal Road	Road	Material Assets	Regional	HTL - Road will remain protected from erosion and flooding will not be a issue. With no intervention the retaining wall would not have failed in this epoch Therefore a neutral impact.	HTL - Road will remain protected from erosion and flooding will not be a significant issue. Therefore a moderate positive impact.	HTL - Road will remain protected from erosion and however regular flooding will disrupt access to the properties to the north. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.6	Newport	Properties	Properties to the North of the Teifi River	Population	Local	HTL - Current flood defences would be maintained and improved if necessary to protect the waterfront areas from SLR. Therefore a neutral impact.	HTL - Current flood defences would be maintained and improved if necessary to protect the waterfront areas from SLR. Therefore a minor positive impact.	HTL - Current flood defences would be maintained and improved if necessary to protect the waterfront areas from SLR. Therefore a minor positive impact.	
5.6	Newport	Footpath	Footpath	Population	Local	NAI - Footpath unlikely to be affected by either erosion or tidal flooding. Therefore a neutral impact.	NAI - Footpath unlikely to be affected by either erosion or tidal flooding. Therefore a neutral impact.	NAI - Footpath unlikely to be affected by either erosion or tidal flooding. Therefore a neutral impact.	
5.8	Newport	Listed Building	Remains of pre Norman house	Historic Environment (Cultural Heritage)	National	HTL - Historic site is within the intertidal zone and SLR will lead to deterioration. Therefore a major negative impact.	HTL - Historic site is within the intertidal zone and SLR will lead to deterioration. Therefore a major negative impact.	HTL - Historic site is within the intertidal zone and SLR will lead to deterioration. Therefore a major negative impact.	Recording.
5.9	Newport	SAM	Defended enclosure SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
5.9	Fishguard and Goodwick	Properties	Residences and Cliff Hotel	Population	Local	NAI - Erosion unlikely to cause any damage to the hotel, or other properties. Therefore a neutral impact.	NAI - Erosion unlikely to cause any damage to the hotel, or other properties. Therefore a neutral impact.	NAI - Accelerated erosion due to SLR may cause damage to part of the Cliff Hotel. Therefore a minor positive impact.	
6.1		Coastal Road	Ministry of Defence; Royal Aircraft Establishment	Material Assets	National	NAI - This feature will be unaffected by erosion in this epoch. Therefore a neutral impact.	NAI - This feature will be unaffected by erosion in this epoch. Therefore a neutral impact.	NAI - The Simulated Ship Firing Platform and some other parts of the base close to the cliffs are likely to be at risk from erosion in this epoch. Therefore a moderate negative impact.	Re-location of parts of the airbase. The function would therefore remain.
6.1	Fishguard	Listed Building	Cadw Listed Building 'Dolewen'	Historic Environment (Cultural Heritage)	National	NAI - The policy of HTL for the adjacent defences at the rear of Traeth Dolwen will limit erosion to the cliffs below the listed building and therefore protect it. Given that erosion would be unlikely to affect listed buildings within this epoch the impact is assessed as neutral .	NAI - The policy of HTL for the adjacent defences at the rear of Traeth Dolwen will limit erosion to the cliffs below the listed building and therefore protect it. Given that erosion would be unlikely to affect listed buildings within this epoch the impact is assessed as neutral .	NAI - The policy of HTL for the adjacent defences at the rear of Traeth Dolwen will limit erosion to the cliffs below the listed building and therefore protect it. Therefore a minor positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
6.1	Penbryn	Properties	Residential Properties	Population	Regional	HTL - By maintaining the defences the properties of Aberporth will remain protected. Without protection properties would not be at risk in this epoch. The impact is therefore assessed as neutral.	HTL - By maintaining the defences the properties of Aberporthand especially those above Traeth Dyffryn will remain protected. Therefore a moderate positive impact.	HTL - By maintaining the defences the properties of Aberporthand especially those above Traeth Dyffryn will remain protected. Therefore a moderate positive impact.	
6.2	Llangranog	Boating / Shipyards	Boat Club	Material Assets	Local	HTL - By maintaining the defences the operation of the sailing club will be able to continue. Therefore a minor positive impact.	HTL - By maintaining the defences the operation of the sailing club will be able to continue. Therefore a minor positive impact.	HTL - By maintaining the defences the operation of the sailing club will be able to continue. Therefore a minor positive impact.	
6.3	Llangranog	Beach	Beach	Population	Regional	HTL - By maintaining the defences the access to both beaches will be maintained. Beach levels should not be an issue in this epoch. Therefore a moderate positive impact.	HTL - By maintaining the defences the access to both beaches will be maintained. Beach levels should not be an issue in this epoch. Therefore a moderate positive impact.	HTL - By maintaining the defences the access to both beaches will be maintained. As sea levels rise there will be a reduction in beach width available for use. Therefore a moderate negative impact.	
6.3	Llanina	Properties	Residential Properties	Population	Local	NAI - Properties unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	NAI - The garden of the property at Ogof Dwnsh may be affected by cliff erosion but the property itself is unlikely to be affected. Therefore a neutral impact.	
6.3	Llanina	Footpath	Coastal Path	Population	Local	NAI - Footpath unlikely to be affected by cliff erosion in this epoch. Therefore a neutral impact.	NAI - Footpath unlikely to be affected by cliff erosion in this epoch. Therefore a neutral impact.	NAI - Some parts of the footpath are likely to become unsafe due to coastal erosion requiring realignment of the route. Therefore a major negative impact.	Realignment of coastal path inland
6.3		Caravan/Holiday Park/Camp Site	Caravan Park	Population	Local	NAI - Caravan parks unlikely to be affected by erosion of the cliffs in this epoch, however possible for some static caravan pitches to become at risk and unsafe. Therefore a neutral impact.	NAI - Likely that some present locations of the caravans will become unsafe due to erosion, however overall functioning of the sites will be un affected. Therefore a neutral impact.	NAI - Likely that some present locations of the caravans will become unsafe due to erosion, however overall functioning of the sites will be un affected. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
6.3	Llanina	Beach	Beach	Population	Regional	HTL - The current defences would be maintained during this epoch, keeping the recreational function of the beach. Therefore a neutral impact.	MR - The intent would be to allow retreat of the western end of the frontage while retaining the road to the east. This will sustain access to the beach, however it is likely that the beach will become steeper and less sandy. Therefore a moderate negative impact.	MR - The intent would be to allow retreat of the western end of the frontage while retaining the road to the east. This will sustain access to the beach, however it is likely that the beach will become steeper and less sandy. Therefore a moderate negative impact.	
6.3	Aberaeron	SAM	Castell Bach SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion unlikely to affect the historic feature. Therefore a neutral impact.	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
6.3	Llanddewi Aberarth Upper	Beach	Beach and slipway	Population	Regional	HTL - The seawall will be maintained protecting access to the beach and allowing its continued use. Therefore a moderate positive impact.	MR - The aim of setting back the defences is to sustain the character and function of the village, which includes having a viable beach. Therefore a moderate positive impact.	MR - The aim of setting back the defences is to sustain the character and function of the village, which includes having a viable beach. Therefore a moderate positive impact.	
6.3		Listed Building	Lime Kiln Cadw Listed Building	Historic Environment (Cultural Heritage)	National	HTL - Erosion or SLR unlikely to affect the listed building. Therefore a neutral impact.	MR - Erosion or SLR unlikely to affect the listed building. Therefore a neutral impact.	MR - Erosion or SLR unlikely to affect the listed building. Therefore a neutral impact.	
6.3	Aberaeron	Access	Access Road into town and car park	Population	Regional	HTL - access will be maintained as defences are kept in this epoch. Therefore a moderate positive impact.	MR - The intent is to sustain access through the village, however the current seafront road may not be sustainable and an alternative configuration may be required. Therefore a moderate negative impact.	MR - The intent is to sustain access through the village, however the current seafront road may not be sustainable and an alternative configuration may be required. Therefore a moderate negative impact.	Alternative road route configuration.
6.3		Properties	Residential Properties	Population	Local	HTL - properties will not be affected as the defences are maintained. If the seawall were not maintained over this epoch it not anticipated properties would be at risk. Therefore a neutral impact.	MR - The principle is to retain as much of the village as possible, however the realignment may require loss of some property around the car park or seafront road. Therefore a minor negative impact.	MR - The principle is to retain as much of the village as possible, however the realignment may require loss of some property around the car park or seafront road. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
6.3		Footpath	Footpath access to beach	Population	Local	NAI - Footpath at risk of becoming dangerous in some locations due to erosion of the cliffs. Therefore a minor negative impact.	NAI - Footpath at risk of becoming dangerous and being lost in some locations due to erosion of the cliffs. Therefore a minor negative impact.	NAI - Footpath at risk of becoming dangerous and being lost in some locations due to erosion of the cliffs. Therefore a minor negative impact.	
6.3		Treatment Plant	SWT	Material Assets	Local	NAI - SWTreatment plant at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	NAI - SWTreatment plant at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	NAI - SWTreatment plant at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	
6.4	Penbryn	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
6.5	Penbryn	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
6.5	Penbryn	Archaeology	Port	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	NAI - Erosion may start to damage the slipway reducing access for boating uses. Therefore a minor negative impact.	
6.6	Llansantffraid	Boating / Shipyards	Shipyards	Historic Environment (Cultural Heritage)	Local	HTL - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Realignment is likely to affect the historic site in this epoch. Therefore a minor negative impact.	MR - Realignment is likely to affect the historic site in this epoch. Therefore a minor negative impact.	
6.6	Llangranog	Archaeology	Quarry (Post-Medieval, Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
6.6	Llangranog	Archaeology	Mine (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
6.6	Llangranog	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
6.7		SAM	Ynys Lochtyn Defended Enclosure SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of the historic feature. Therefore a neutral impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a neutral impact.	NAI - Erosion may cause damage or loss of the historic feature. Therefore a neutral impact.	
6.7		SAM	Castall Bach SAM	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause damage or loss of some of the historic feature. Therefore a major negative impact.	Excavation and recording.
6.7	Llanllwchaiarn	Archaeology	Harbour (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
6.7	Llanllwchaiarn	Archaeology	Natural feature	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
6.7	Llanllwchaiarn	Archaeology	Quarry (Post-Medieval,Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
6.7	Llanllwchaiarn	Archaeology	Weapons pit,Scoop grave (Bronze Age;Modern)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
6.7	Llanllwchaiarn	Archaeology	Platform	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
6.8		Car Park	Car Park	Population	Local	HTL - The current defences would be maintained protecting the car park. If undefended the seawall would not fail in this epoch. Therefore a neutral impact.	HTL - The current defences would be maintained protecting the car park from loss. Therefore a minor positive impact.	NAI - As the defences are no longer maintained it is likely that with SLR the defences will fail quickly and the car park would be lost. Therefore a minor negative impact.	
6.8	Llansantffraid	Coastal Road	Coastal Road	Material Assets	Local	HTL - The current defences would be maintained the road and access. If not maintained the seawall would not fail in this epoch sustaining access to the beach. Therefore a neutral impact.	HTL - The current defences would be maintained. Therefore a minor negative impact.	NAI - As the defences are no longer maintained it is likely that with SLR the defences will fail quickly leading to damage to and potential loss of the road and beach access. Therefore a minor negative impact.	
6.8	Llansantffraid	Properties	Cottages	Population	Local	HTL - The current defences would be maintained protecting the properties. If the seawall were not maintained it would not fail in this epoch. Therefore a neutral impact.	HTL - The current defences would be maintained protecting the properties. If the seawall were not maintained it would not fail in this epoch. Therefore a neutral impact.	NAI - As the defences are no longer maintained it is likely that with SLR the defences will fail quickly, however it is unlikely that erosion will threaten the properties in this epoch. This would be an issue in the future though. Therefore a neutral impact.	
6.8	Geneu'rglyn	Listed Building	Former Lime Kiln Cadw LB	Historic Environment (Cultural Heritage)	National	HTL - The current defences would be maintained protecting the listed building. If not maintained the current defences would not fail during this epoch. Therefore a neutral impact.	HTL - The current defences would be maintained protecting the listed building. Therefore a major positive impact.	NAI - As the defences are no longer maintained it is likely that with SLR the defences will fail quickly, potentially threatening the listed building. Therefore a major negative impact.	Recording.
7.1		Properties	Residential properties and the access roads to these houses and pathways	Population	Regional	MR/HTL - The properties are unlikely to be at risk from erosion or SLR in this epoch. Therefore a neutral impact.	MR/HTL - The properties in New Quay town would remain protected from erosion and are not at risk from SLR. Above the cliffs on Brogwyn Lane some properties will be at risk as the cliffs are allowed to retreat. Therefore a minor negative impact.	MR/HTL - The properties in New Quay town would remain protected from erosion and are not at risk from SLR. Above the cliffs on Brogwyn Lane some properties will be at risk as the cliffs are allowed to retreat. Therefore a minor negative impact.	
7.1		Footpath	Footpath along beach of Treath Cei Newydd	Population	Local	MR - Public right of way unlikely to be affected in this epoch. Therefore a neutral impact.	MR - As coastal slope and shingle ridge are allowed to retreat public right of way likely to be lost in this epoch. Therefore a minor negative impact.	MR - As coastal slope and shingle ridge are allowed to retreat public right of way likely to be lost in this epoch. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
7.1		Properties	Services to properties	Population	Local	MR/HTL - Services to properties are unlikely to be at risk from erosion or SLR in this epoch. Therefore a neutral impact.	MR/HTL - Services to properties are unlikely to be at risk from erosion or SLR in this epoch. Therefore a neutral impact.	MR/HTL/NAI - Services to properties are unlikely to be at risk from erosion or SLR in this epoch. Therefore a neutral impact.	
7.1	New Quay Bay	Listed Building	NO.22 (NEUADD ROCK), ROCK STREET (W SIDE)	Historic Environment (Cultural Heritage)	National	MR - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	MR- Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	Recording.
7.1	New Quay Bay	Listed Building	NO.23 (SNOWDON VIEW), ROCK STREET (W SIDE)	Historic Environment (Cultural Heritage)	National	MR - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	MR- Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	Recording.
7.2		Listed Building	Many cadw listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected by flooding or erosion in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected by flooding or erosion in this epoch. Therefore a major positive impact.	HTL - Listed buildings unlikely to be affected by flooding or erosion in this epoch. Therefore a major positive impact.	
7.2		Pier	Stone Pier	Material Assets	Regional	HTL -The Stone Pier would be maintained, retaining its use form recreation and sea defence. Without intervention the stone pier would not be significantly damaged in this epoch. Therefore a neutral impact.	HTL -The Stone Pier would be maintained, retaining its use form recreation and sea defence. Therefore a moderate positive impact.	HTL -The Stone Pier would be maintained, retaining its use form recreation and sea defence. Therefore a moderate positive impact.	
7.2	Geneu'r glyn	Harbour / Marina	Harbour mouth	Material Assets	Regional	HTL - Siltation of the harbour would continue and without the present sediment removal access may be lost. With HTL it is anticipated dredging would continue and access maintained. Therefore a moderate positive impact.	HTL - Siltation of the harbour would continue and without the present sediment removal access may be lost. With HTL it is anticipated dredging would continue and access maintained. Therefore a moderate positive impact.	HTL - Siltation of the harbour would continue and without the present sediment removal access may be lost. With HTL it is anticipated dredging would continue and access maintained. Therefore a moderate positive impact.	
7.2	Borth	Lifeboat/ Lifeguard Station	RNLI Station	Material Assets	Regional	HTL - Defences maintained to the lifeboat station and therefore its function will be maintained. Without intervention the lifeboat station would not be at risk in this epoch. Therefore a neutral impact.	HTL - Defences maintained to the lifeboat station and therefore its function will be maintained. Therefore a moderate positive impact.	HTL - Defences maintained to the lifeboat station and therefore its function will be maintained. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
7.3	Borth	Caravan/Holiday Park/Camp Site	Caravan Parks and Holiday camps	Population	Local	Caravan park unlikely to be affected by the ongoing erosion of the clay cliffs. Therefore a neutral impact.	Caravan pitches are likely to be lost due to erosion, with an estimated 60 pitches affected. Therefore a minor negative impact.	Caravan pitches are likely to be lost due to erosion, with an estimated 200 pitches affected. Therefore a minor negative impact.	Relocation of caravan pitches landward of the eroding cliff line.
7.3	Llanina	Archaeology	Mound	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
7.3	Llanina	Archaeology	Holy well (Medieval)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
7.3	Llanina	Archaeology	Summer house (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
7.5	Borth	Caravan/Holiday Park/Camp Site	Caravan Park	Population	Local	HTL - Caravan and camping park unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Caravan and camping park unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Caravan and camping park unlikely to be affected in this epoch. Therefore a neutral impact.	
7.6	Llanina	Archaeology	Quarry (Post-Medieval,Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
7.6	Llanina	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
7.5	Borth	Caravan/Holiday Park/Camp Site	Caravan and camping park	Population	Local	HTL - Caravan park remains protected as defences are maintained. Therefore a neutral impact.	HTL - Caravan park remains protected as defences are maintained. Therefore a neutral impact.	MR - Caravan park not likely to be affected by MR. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
8.1		Caravan/Holiday Park/Camp Site	Holiday Village	Population	Local	NAI - Holiday park unlikely to be affected by erosion or flooding in this epoch. Therefore a neutral impact.	NAI - Holiday park partially affected by erosion in this epoch resulting in loss of a small number of chalets. Therefore a minor negative impact.	NAI - Holiday park partially affected by erosion in this epoch resulting in loss of a number of chalets. Therefore a minor negative impact.	Relocation of chalets landward of the cliff line.
8.2	Borth	Properties	Residential properties	Population	Local	HTL - Defences will be maintained and properties will remain protected from both erosion and flooding. If not maintained the current defences would not yet have failed. Therefore a neutral impact.	HTL - Defences will be maintained and properties will remain protected from both erosion and flooding. Therefore a minor positive impact.	HTL - Defences will be maintained and properties will remain protected from both erosion and flooding within the harbour and to the north. But the policy of MR to the south may lead to the loss of some properties through erosion and set back of the coast. Therefore a minor negative impact.	
8.2		Listed Building	Many listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Defences will be maintained so the listed buildings will be unaffected. If not maintained the defences are unlikely to have failed in this epoch and therefore the listed buildings would be unaffected. Therefore a neutral impact.	HTL - Defences will be maintained and improved to protect against increasing flood levels so the listed buildings will be unaffected. Therefore a major positive impact.	HTL - Defences will be maintained and improved to protect against increasing flood levels. Therefore a major positive impact.	
8.2	Aberaeron	Archaeology	Weigh house (Post-Medieval)	Historic Environment (Cultural Heritage)	National	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
8.2	Llanddewi Aberarth Upper	Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	National	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
8.2		Archaeology	Quay (Post-Medieval)	Historic Environment (Cultural Heritage)	National	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
8.2	Aberaeron	Archaeology	Harbour (Post-Medieval)	Historic Environment (Cultural Heritage)	National	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
8.3		Harbour / Marina	Harbour	Material Assets	Regional	HTL - Defences will be maintained so the use and character of the harbour will be maintained. Without intervention the harbour is still likely to be functioning, however the walls will have started to deteriorate. Therefore a neutral impact.	HTL - Defences will be maintained so the use and character of the harbour will be maintained. Therefore a moderate positive impact.	HTL - Defences will be maintained so the use of the harbour will be maintained. Character may be impacted as the harbour walls will need to be raised. Therefore a moderate positive impact.	
8.3		Slipway and Access	Slipways and steps to beach	Material Assets	Local	HTL - Defences will be maintained and so will the access to the beach. With no intervention the defences on the north beach are unlikely to fail in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and so will the access to the beach. With no intervention the defences on the north beach are unlikely to fail in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and so will the access to the beach which will be protected from erosion and loss. Therefore a minor positive impact.	
8.4	Borth	Caravan/Holiday Park/Camp Site	Caravan Parks	Population	Local	HTL - Defences would be maintained and improved, so the caravan park would be unaffected. If the defences were not improved the current defences would still protect the caravan park in this epoch. Therefore a neutral impact.	HTL - Defences would be maintained and improved, so the caravan park would be unaffected. If not protected the defence would have deteriorated in this epoch but not failed. Therefore a neutral impact.	HTL - Defences would be maintained and improved, so the caravan park would be unaffected. Therefore a minor positive impact.	
8.2		Listed Building	Weigh House Beach Parade	Historic Environment (Cultural Heritage)	National	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	Recording.
8.6	Borth	Listed Building	Many listed buildings, chapel etc	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Two listed buildings likely to be lost due to erosion in this epoch if not protected. Therefore a major positive impact.	
8.6	Borth	Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties likely to be lost as part of the realignment in this epoch. Therefore a minor negative impact.	
8.3	Ysgubor-y-Coed	Sewage Works	Sewage pumping station	Material Assets	Local	HTL - Assets unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Assets unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Assets unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
8.8		Hotel	Hotel and caravan park	Population	Local	MR - Hotel and caravan park unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Current private defences to the hotel if maintained may provide protection to the access road preventing loss of the hotel and caravan park in this epoch. Therefore a minor positive impact.	MR - up to a third of caravan pitches could be lost due to erosion, as well as the access road. In addition part of the caravan park north of the Afon Wyre would be flooded on a normal spring tide and therefore would be abandoned. Therefore a minor negative impact.	Relocation of caravan pitches landward of the eroding cliff line, and relocation of access road.
8.6		Listed Building	Clifton / Manteg	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Erosion may cause damage or loss of some of the historic feature. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of some of the historic feature. Therefore a minor negative impact.	Recording.
8.8		Listed Building	Blacksmiths workshop/ listed churches	Historic Environment (Cultural Heritage)	National	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
8.8		Properties	Properties	Population	Local	MR - Properties unlikely to be lost to erosion in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be lost to erosion in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be lost to erosion in this epoch. Therefore a minor positive impact.	
8.8		Historical	Fish traps	Historic Environment (Cultural Heritage)	Local	MR - Fish traps are in the intertidal zone, SLR will lead to progressive deterioration of these sites. Therefore a minor negative impact.	MR - Fish traps are in the intertidal zone, SLR will lead to progressive deterioration of these sites. Therefore a minor negative impact.	MR - Fish traps are in the intertidal zone, SLR will lead to progressive deterioration of these sites. Therefore a minor negative impact.	
8.8		Historical	Aberstrincell or Graiglas Limekilns	Historic Environment (Cultural Heritage)	Local	MR - Kilns and their setting unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	MR - Kilns unlikely to be affected by erosion in this epoch, however setting will be affected as erosion begins as the masonry walls are removed. Under a higher rate of erosion some of the kilns would be lost. Therefore a minor negative impact.	MR - Kilns likely to be affected by erosion in this epoch leading to loss of a large part of the site. Therefore a minor negative impact.	
8.9		Car Park	Small car park	Population	Local	MR - Car park unlikely to be affected by erosion in this epoch and flooding would be infrequent. Therefore a neutral impact.	MR - Erosion will start to cause the loss of part of the car park. Therefore a minor negative impact.	MR - Erosion will have led to loss of the whole of the present car park. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
8.9		Caravan/Holiday Park/Camp Site	Caravan Parks	Population	Local	MR - Erosion and flood risk are unlikely to threaten the caravan parks in this epoch. Therefore a neutral impact.	MR - Erosion is unlikely to significantly impact upon the caravan parks in this epoch, although the plots closest to the coastal slope may become unsafe unless private defences are built. Therefore a neutral impact.	MR - Large areas of the caravan parks are likely to be lost to erosion in this epoch unless private defences are built. In addition part of the caravan park north of the Afon Wyre would be flooded on a normal spring tide and therefore would be abandoned. Therefore a minor negative impact.	Relocation of caravan pitches landward of the eroding cliff line.
9.1		Caravan/Holiday Park/Camp Site	Caravan park	Population	Local	NAI - The caravan park is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - The caravan park is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Through erosion of the coastal slope part of the caravan park would be lost however this is unlikely to affect its function. Therefore a neutral impact.	
9.1		Archaeology	Lime kiln (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
9.2		Archaeology	Platform (Post-Medieval,Medieval)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
9.2		Archaeology	Tramway (Post-Medieval,Medieval)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
9.11		Properties	Properties and caravan park	Population	Regional	MR - Properties are unlikely to be affected in this epoch. Therefore a neutral impact.	MR - The realignment will require properties to be moved from the central area of Clarach Bay. Therefore a moderate negative impact.	MR - Properties associated with the caravan park at the northern end of the bay would be lost as part of the realignment. Therefore a moderate negative impact.	Provision of space for relocation of properties.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
9.13		SAM	Lime Kiln near Wallog Farm	Historic Environment (Cultural Heritage)	National	NAI - Listed building unlikely to be affected by SLR or erosion in this epoch. Therefore a neutral impact.	NAI - The seawall to the north is assumed to be maintained which would prevent erosion from threatening the listed building. SLR is not an issue in this epoch. Therefore a neutral impact.	NAI - The seawall to the north is assumed to be maintained which would prevent erosion from threatening the listed building. SLR is not an issue in this epoch. Therefore a neutral impact.	
9.13		Properties	Property	Population	Local	NAI - Property unlikely to be affected in this epoch as the seawall is assumed to be maintained. Therefore a minor positive impact.	NAI - Property unlikely to be affected in this epoch as the seawall is assumed to be maintained. Therefore a minor positive impact.	NAI - Property unlikely to be affected in this epoch as the seawall is assumed to be maintained. Therefore a minor positive impact.	
9.2		Historical	Tramway	Historic Environment (Cultural Heritage)	Local	MR - the tramway is unlikely to be affected in this epoch. Therefore a neutral impact.	MR - the tramway is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - The shingle ridge will be allowed to breach through to the Afon Ystwyth leading to erosion of the southern end of the site. Therefore a minor negative impact.	
9.2		Properties	Properties	Population	Local	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - A few properties may be affected by roll back of the shingle ridge following diversion of the Afon Ystwyth. Therefore a minor negative impact.	
9.2		Listed Building	Multiple Cadw listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Defences will be maintained and therefore the listed buildings would remain protected. If the current defences were not maintained the listed buildings are unlikely to be affected in this epoch. The impact is therefore assessed as neutral .	HTL - Defences will be maintained and therefore the listed buildings would remain protected. Therefore a major positive impact.	HTL - Defences will be maintained and therefore the listed buildings would remain protected. Therefore a major positive impact.	
9.3		Access	Estuary Mouth	Material Assets	Regional	MR - The Afon Ystwyth will be maintained along its present course and therefore access to the estuary will be unaffected. The harbour is still likely to be functioning, however the walls will have started to deteriorate. Therefore a moderate positive impact.	MR - The Afon Ystwyth will be maintained along its present course and therefore access to the estuary will be unaffected. Therefore a moderate positive impact.	NAI - The Afon Ystwyth will be diverted through the new mouth as the Tan y Bwlch shingle ridge is breached. This will negatively impact upon access to the estuary, however will be insignificant due to SLR and the increased tidal prism of the Afon Rheidol. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
9.3		Pier	Old Stone Pier	Material Assets	Regional	HTL - The Pier would be maintained as part of the preferred policy. Without intervention the pier would not be lost in this epoch. Therefore a neutral impact .	HTL - The Pier would be maintained as part of the preferred policy. Therefore a moderate positive impact .	HTL - The Pier would be maintained as part of the preferred policy. Therefore a moderate positive impact .	
9.3		Harbour / Marina	Harbour/marina	Material Assets	National	HTL - The use of the harbour would be maintained along with the character of Aberystwyth. Without intervention the use of the harbour would still be possible in this epoch. Therefore a neutral impact .	HTL - The use of the harbour would be maintained and protected from loss along with the character of Aberystwyth. Therefore a major positive impact .	HTL - The use of the harbour would be maintained and protected from loss along with the character of Aberystwyth. Therefore a major positive impact .	
9.3		Properties	Properties	Population	National	HTL - Defences will be maintained and properties will remain protected. If defences not maintained they are unlikely to have failed in this epoch. Therefore a neutral impact .	HTL - Defences will be maintained and properties will remain protected. Therefore a major positive impact .	HTL/MR - Defences will be maintained to the majority of the properties, however realignment at Glanrafon Terrace would lead to the loss of some properties there. Therefore a major positive impact for the majority of the properties.	
								HTL/MR - Defences will be maintained to the majority of the properties, however realignment at Glanrafon Terrace would lead to the loss of some properties there. Therefore a minor negative impact for the loss of properties associated with the realignment.	
9.3		Slipway and Access	Roads/Bridges/Promenades and slipways	Material Assets	National	HTL - Defences will be maintained, protecting the promenades, roads, slipways and bridges. With no intervention it is unlikely these features would be lost in this epoch. Therefore a neutral impact .	HTL - Defences will be maintained, protecting the promenades, roads, slipways and bridges. Therefore a major positive impact .	HTL - Defences will be maintained, protecting the promenades, roads, slipways and bridges. Therefore a major positive impact .	
9.7		SAM	Aberystwyth Castle	Historic Environment (Cultural Heritage)	National	HTL - Defences will be maintained and the SAM will remain protected, although under NAI the same is unlikely to be affected in this epoch. Therefore a neutral impact .	HTL - Defences will be maintained and the SAM will remain protected from the potential erosion on the western edge, although this is uncertain. Therefore a moderate positive impact .	HTL - Defences will be maintained and the SAM will remain protected and would otherwise be subjected to loss of part of the site due to erosion. Therefore a major positive impact .	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
9.8		Listed Building	Chapel	Historic Environment (Cultural Heritage)	National	N/A Site classified as destroyed. Therefore a neutral impact.	N/A Site classified as destroyed. Therefore a neutral impact.	N/A Site classified as destroyed. Therefore a neutral impact.	
9.8		Pier	Pier	Material Assets	Local	HTL - The function of the pier is unlikely to be affected in this epoch as the defences to the promenade will remain. Therefore a neutral impact.	HTL - The function of the pier is unlikely to be affected in this epoch as the defences to the promenade will be maintained. With no intervention the defences would have failed in this epoch, the road would have been lost due to erosion and the use for the pier and pavilion would have been lost. Therefore a minor positive impact.	HTL - The function of the pier is unlikely to be affected in this epoch as the defences to the promenade will remain. Therefore a minor positive impact.	
10.1	Geneu'rglyn	Archaeology	Natural feature	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
10.1		Caravan/Holiday Park/Camp Site	Caravan Parks	Population	Regional	MR - Caravan park unlikely to be affected. Therefore a neutral impact.	MR - Caravan park unlikely to be affected. Therefore a neutral impact.	MR - Caravan park unlikely to be affected, however access to beach may become dangerous due to erosion of the cliffs. Therefore a neutral impact.	
10.1		Listed Building	Commemorative monument	Historic Environment (Cultural Heritage)	National	MR - War memorial unlikely to be affected in this epoch. Therefore a neutral impact.	MR - War memorial unlikely to be affected in this epoch. Therefore a neutral impact.	MR - War memorial unlikely to be affected in this epoch. Therefore a neutral impact.	
10.1		Properties	Properties	Population	Local	MR - Properties are unlikely to be affected in this epoch. Therefore a neutral impact.	MR - A buffer zone would be created to allow future coastal recession requiring the loss of properties along Cliff Road. Therefore a minor negative impact.	MR - A buffer zone would be created to allow future coastal recession requiring the loss of properties along Cliff Road. Therefore a minor negative impact.	
10.1		Coastal Road	Coastal road	Material Assets	Regional	MR - Cliff Road unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Cliff Road likely to be lost as part of creating a buffer to allow for future coastal recession. Therefore a moderate negative impact.	MR - Cliff Road likely to be lost as part of creating a buffer to allow for future coastal recession. Therefore a moderate negative impact.	Alternative route configuration.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.2		Properties	Coastal properties	Population	Regional	HTL - Defences to the properties would be maintained preventing any loss. Therefore a moderate positive impact.	HTL - Defences to the properties would be maintained preventing any loss. Therefore a moderate positive impact.	MR - The realignment may require relocation of some properties. Therefore a moderate negative impact.	Early warning systems for flooding and relocation of properties.
10.2	Aberystwyth	Listed Building	Many listed buildings, chapel etc	Historic Environment (Cultural Heritage)	National	HTL - as defences are maintained the listed building and its setting will remain protected. If not maintained the defences are unlikely to have failed in this epoch and therefore the listed buildings would be unaffected. Therefore a neutral impact.	HTL - Defences would be maintained preventing loss of any listed buildings. Therefore major positive impact.	MR - realignment is unlikely to affect the listed buildings in this epoch. Therefore a neutral impact.	
10.2	Aberystwyth	Slipway and Access	Slipway	Material Assets	Local	HTL - As the defences will be maintained the slipway and access to the beach will also be maintained. With no intervention the current defences would not fail in this epoch. Therefore a neutral impact.	HTL - As the defences will be maintained the slipway and access to the beach will also be maintained. However SLR will mean that this area is flooded on regular spring tides so access would be more limited. Therefore a mixed impact.	MR - Under this policy it is likely there would need to be realignment of the slipway but it is anticipated its function would still be maintained. Therefore a neutral impact.	
10.2		Lifeboat/ Lifeguard Station	RNLI station	Material Assets	Regional	HTL - As defences will be maintained the lifeboat station will remain protected. With no intervention the lifeboat station would not be affected in this epoch. Therefore a neutral impact.	HTL - As defences will be maintained the lifeboat station will remain protected. Therefore a moderate positive impact.	MR - Under this policy it is likely the asset would be lost due to SLR and coastal recession. Therefore a moderate negative impact.	Adaption and relocation of asset.
10.2	Aberystwyth	Railway	Railway Station and Railway Line	Material Assets	Regional	HTL - As defences will be maintained the lifeboat station will remain protected. With no intervention the lifeboat station would not be affected in this epoch. Therefore a neutral impact.	HTL - As defences will be maintained the railway station and railway line will remain protected. Therefore a moderate positive impact.	MR - The asset would not be affected and remain protected. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.2	Borth Village	Listed Building	Angorfa, Morfan and Sabrina Cottage	Historic Environment (Cultural Heritage)	National	HTL - as defences are maintained the listed building and its setting will remain protected. If not maintained the defences are unlikely to have failed in this epoch and therefore the listed buildings would be unaffected. Therefore a neutral impact.	HTL - as defences are maintained the listed building and its setting will remain protected. If not maintained the defences are unlikely to have failed in this epoch and therefore the listed buildings would be unaffected. Therefore a neutral impact.	MR - Erosion may cause damage or loss of some of the historic feature. Therefore a minor negative impact.	Recording.
10.2	Aberystwyth	Protected Wreck	Wreck Visible at Low tide	Historic Environment (Cultural Heritage)	Regional	HTL - Wrecks beyond the influence of the defences. Will be submerged for longer due to SLR. Therefore a neutral impact.	HTL - Wrecks beyond the influence of the defences. Will be submerged for longer due to SLR. Therefore a neutral impact.	MR - Wrecks beyond the influence of the defences. Will be submerged for longer due to SLR. Therefore a neutral impact.	
10.3	Aberystwyth	Protected Wreck	three wrecks visible at low tide	Historic Environment (Cultural Heritage)	Regional	HTL - Wrecks beyond the influence of the defences. Will be submerged for longer due to SLR. Therefore a neutral impact.	HTL - Wrecks beyond the influence of the defences. Will be submerged for longer due to SLR. Therefore a neutral impact.	MR - Wrecks beyond the influence of the defences. Will be submerged for longer due to SLR. Therefore a neutral impact.	
10.3		Submerged Forest	Submerged forest	Historic Environment (Cultural Heritage)	Local	HTL - Submerged forest beyond the influence of shoreline management. Therefore a neutral impact.	HTL - Submerged forest beyond the influence of shoreline management. Therefore a neutral impact.	MR - Submerged forest beyond the influence of shoreline management. Therefore a neutral impact.	
10.4		Historical	Anti landing obstacle	Historic Environment (Cultural Heritage)	Local	MR - Historic feature unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic feature unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic feature unlikely to be affected in this epoch, however it may experience some infrequent flooding. Therefore a minor negative impact.	
10.4	Aberystwyth	Protected Wreck	remains of two wrecks within the mudflats	Historic Environment (Cultural Heritage)	Regional	N/A - Wrecks are within the estuary beyond the influence of the defences. Changes in the behaviour of the estuary in response to shoreline management may impact upon them however this cannot be determined by the SMP. Therefore a neutral impact.	N/A - Wrecks are within the estuary beyond the influence of the defences. Changes in the behaviour of the estuary in response to shoreline management may impact upon them however this cannot be determined by the SMP. Therefore a neutral impact.	N/A - Wrecks are within the estuary beyond the influence of the defences. Changes in the behaviour of the estuary in response to shoreline management may impact upon them however this cannot be determined by the SMP. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.6		Listed Building	Listed buildings, dwellings	Historic Environment (Cultural Heritage)	National	HTL - Defences would be maintained so the historical site would remain protected. If not maintained the defences would not have failed in this epoch. Therefore the impact is assessed as neutral.	HTL - Defences would be maintained so the historical site would remain protected. If not maintained the defences would not have failed in this epoch. Therefore the impact is assessed as neutral.	MR - It is likely that this site would be lost through the realignment process. Therefore a major negative impact.	Recording.
10.6	Aberystwyth	Listed Building	Military listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Defences would be maintained so the historical site would remain protected. If not maintained the defences would not have failed in this epoch. Therefore the impact is assessed as neutral.	HTL - Defences would be maintained so the historical site would remain protected. If not maintained the defences would not have failed in this epoch. Therefore the impact is assessed as neutral.	MR - It is likely that this site would be lost through the realignment process. Therefore a major negative impact.	Recording.
10.6	Aberystwyth	Listed Building	18th century farmstead/dwellings	Historic Environment (Cultural Heritage)	National	HTL - Unlikely that the historic feature would be affected in this epoch. Therefore a neutral impact.	HTL - Unlikely that the historic feature would be affected in this epoch. Therefore a neutral impact.	MR - Unlikely that the historic feature would be affected in this epoch. Therefore a neutral impact.	
10.6		SAM	Domen Las SAM	Historic Environment (Cultural Heritage)	National	HTL - Defences will be maintained and the SAM will remain protected. Therefore a neutral impact.	HTL - Defences will be maintained and the SAM will remain protected. Therefore a neutral impact.	MR - Realignment of the defences is likely to lead to the loss of the SAM. Therefore a major negative impact.	Excavation and recording.
10.11	Aberystwyth	Railway	Railway line	Material Assets	National	HTL - Defences will be maintained to ensure the railway is protected. Without intervention the railway is unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained to ensure the railway is protected. Without intervention the railway is unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Defences will be realigned along with the realignment of the railway line so the route should be maintained. Therefore a major positive impact.	
10.12	Aberystwyth	Railway	Railway line	Material Assets	National	HTL - Defences will be maintained to ensure the railway is protected. Without intervention the railway is unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained to ensure the railway is protected. Therefore a major positive impact.	HTL - Defences will be maintained to ensure the railway is protected from erosion and loss. Therefore a major positive impact.	
10.12		Listed Building	Trefri Hall Cadw Listed Building	Historic Environment (Cultural Heritage)	National	HTL - The listed building in unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - The listed building in unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - The listed building in unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.12		Properties	Residences and properties	Population	Regional	HTL - Defences will be maintained and properties will remain protected. If defences not maintained they are unlikely to have failed in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and properties will remain protected. Therefore a moderate positive impact.	HTL - Defences will be maintained and properties will remain protected. Therefore a moderate positive impact.	
10.13	Aberystwyth	Listed Building	Many cadw listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Defences will be maintained so the listed buildings will be unaffected. If not maintained the defences are unlikely to have failed in this epoch and therefore the listed buildings would be unaffected. Therefore a neutral impact.	HTL - Defences will be maintained protecting the listed buildings and their setting. If the current defences were not maintained the listed buildings are unlikely to be directly affected by in this epoch but erosion of Terrace Road will have a detrimental impact on their setting. Therefore major positive impact.	HTL - Defences will be maintained protecting the listed buildings and their setting. Therefore major positive impact.	
10.13		Slipway and Access	Slipways, footpaths and jetties	Material Assets	Regional	HTL - Slipways and beach access will be maintained as part of the defences. With no intervention the current defences would not fail in this epoch. Therefore a neutral impact.	HTL - Slipways and beach access will be maintained as part of the defences. Therefore a moderate positive impact.	HTL - Slipways and beach access will be maintained as part of the defences. Therefore a moderate positive impact.	
10.14		Golf Course	Sand Dunes/ Golf Course	Population	Regional	MR - It is unlikely that the golf course or nature conservation value of the dune system would be affected in this epoch. Therefore a neutral impact.	MR - It is likely that toward the northern end of the golf course the dunes will be allowed to migrate onto the course requiring adaptation. However this will maintain the flood defence function of the dunes and the nature conservation value. Therefore a moderate positive impact.	MR - Further development of the dune system would lead to loss of more of the present golf course area. However this will maintain the flood defence function of the dunes and the nature conservation value. Therefore a moderate positive impact.	
10.15		Historic Parks and Gardens	South of Twywn, Landscape of Special Historic Interest	Historic Environment (Cultural Heritage)	National	MR - This policy would allow the natural function of the coastline with defences to the road and railway line maintained. There may be some loss with SLR. Therefore a minor negative impact.	MR - This policy would allow the natural function of the coastline with defences to the road and railway line maintained. There may be some loss with SLR. Therefore a minor negative impact.	MR - This policy would allow the natural function of the coastline with defences to the road and railway line maintained. There may be some loss with SLR. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.15		Caravan/Holiday Park/Camp Site	Caravan Parks	Population	Regional	HTL - Defences would be maintained so that the caravan park would remain protected. Without protection the current defences would not yet have failed. Therefore a neutral impact.	HTL - Defences would be maintained so that the caravan park would remain protected. Therefore a moderate positive impact.	HTL - Defences would be maintained so that the caravan park would remain protected. Therefore a moderate positive impact.	
10.15		Properties	Settlement	Population	Regional	HTL - Defences to the seaward frontage will be maintained preventing loss of properties through erosion. Defences in the Dysynni Estuary will be maintained to protect properties on the northern edge of the town from flooding. If defences not maintained they are unlikely to have failed in this epoch. Therefore a neutral impact.	HTL/MR - Defences to the seaward frontage will be maintained preventing loss of properties through erosion. Realignment of defences in the Dysynni Estuary will still protect properties on the northern edge of the town from flooding. Therefore a moderate positive impact.	HTL/MR - Defences to the seaward frontage will be maintained preventing loss of properties through erosion. Realignment of defences in the Dysynni Estuary will still protect properties on the northern edge of the town from flooding. Therefore a moderate positive impact.	
10.15		Archaeology	Other structure (Modern)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
10.16	Aberystwyth	Coastal Road	Coastal road	Material Assets	Regional	HTL - Defences would be maintained and the road would be protected. Without intervention defence would not have failed in this epoch. Therefore a neutral impact.	HTL - Defences would be maintained and the road would be protected. Therefore a moderate positive impact.	HTL - Defences would be maintained and the road would be protected. Therefore a moderate positive impact.	
10.16	Aberystwyth	Properties	Properties to the north of sea wall	Population	Local	HTL - Defences would be maintained and the properties would be protected. Therefore a minor positive impact.	HTL - Defences would be maintained and the properties would be protected. Therefore a minor positive impact.	HTL - Defences would be maintained and the properties would be protected. Therefore a minor positive impact.	
10.16		Railway	Railway line	Material Assets	National	HTL - Defences will be maintained and the railway will remain protected. Therefore a major positive impact.	HTL - Defences will be maintained and the railway will remain protected from erosion and loss. Therefore a major positive impact.	HTL - Defences will be maintained and the railway will remain protected from erosion and loss. Therefore a major positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.17	Aberystwyth	Sewage Works	Sewage works	Material Assets	Local	HTL - Defences will be maintained and the sewage works will remain protected. If defences not maintained it is unlikely the sewage works would be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and the sewage works will remain protected from flooding. Therefore a minor positive impact.	HTL/MR - Defences will be maintained and the sewage works will remain protected from erosion. Realigned defences would protect the sewage works from flooding from the Afon Dysynni. Therefore a minor positive impact.	
10.18	Aberystwyth	Railway	Bridge and embankments	Material Assets	National	HTL - the railway including the bridge will remain defended. Without intervention the bridge and railway line are unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - the railway including the bridge will remain defended. Without intervention the bridge and railway line are unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - the railway including the bridge will remain defended. Therefore a major positive impact.	
10.18	Aberystwyth	Listed Building	Ynysmaengwyn dovecote, Cadw listed buildings	Historic Environment (Cultural Heritage)	National	HTL - as defences are maintained the listed building and its setting will remain protected. If not maintained the defences are unlikely to have failed in this epoch and therefore the listed buildings would be unaffected. Therefore a neutral impact.	MR - The managed realignment process is unlikely to directly affect the listed building as it is outside the area of flood risk. Therefore a neutral impact.	MR - The managed realignment process is unlikely to directly affect the listed building as it is outside the area of flood risk. Therefore a neutral impact.	
10.18	Aberystwyth	Properties	Properties along dysynni river	Population	Local	HTL - Defences are maintained protecting the properties at risk from flooding. If defences not maintained properties are unlikely to have been affected in this epoch. Therefore a neutral impact.	MR - As defences are realigned it is likely that some properties may be lost as there is no justification to provide new defences. Therefore a minor negative impact.	MR - As defences are realigned it is likely that some properties may be lost as there is no justification to provide new defences. Therefore a minor negative impact.	
10.18		Footpath	Footpath	Population	Local	HTL - As defences are maintained the public right of way will remain protected. If not maintained the current defences would not yet have failed in this epoch. Therefore a neutral impact.	MR - Realignment within the estuary is likely to lead to the loss of the current alignment of the public right of way. Therefore a minor negative impact.	MR - Realignment within the estuary is likely to lead to the loss of the current alignment of the public right of way. Therefore a minor negative impact.	
10.18		SAM	Llechrwyd Hillfort SAM	Historic Environment (Cultural Heritage)	National	HTL - SAM or its setting unlikely to be affected in this epoch. Therefore a neutral impact.	MR - SAM or its setting unlikely to be affected in this epoch. Therefore a neutral impact.	MR - SAM or its setting unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.18		Agriculture/Farming	Agricultural land	Material Assets	Local	HTL - Under this policy land would be protected. Therefore a minor positive impact.	MR - This policy would be developed with landowners. Given the lack of detail at this stage the impact is assessed as indeterminable.	MR - This policy would be developed with landowners. Given the lack of detail at this stage the impact is assessed as indeterminable.	
10.19		Railway	Railway line and footpath	Material Assets	National	HTL - The railway will be specifically defended to maintain the transport link. It is assumed that this will also include protection for the public right of way. Without intervention the railway line and public rights of way are unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - The railway will be specifically defended to maintain the transport link. It is assumed that this will also include protection for the public right of way. Therefore a major positive impact.	HTL - The railway will be specifically defended to maintain the transport link. It is assumed that this will also include protection for the public right of way. Therefore a major positive impact.	
11.1		Listed Building	Felin Fraenan Cadw listed building	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. However coastal recession may lead to the need for defence to the railway behind. It is assumed that these would have to be in front of the listed building. Given the listed building would not be lost under NAI the impact is assessed as a neutral impact.	
11.1	Fishguard and Goodwick	Listed Building	Church of Llangelynin cadw listed building	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	
11.1	Fishguard and Goodwick	Caravan/Holiday Park/Camp Site	Camp site and properties	Population	Local	HTL - Campsite unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - This policy relates to defence of the railway, it is unlikely that the campsite would be defended apart from through private works and therefore it is likely that part of the campsite would be lost in this epoch. Associated properties will be unaffected and therefore function would be maintained. therefore a neutral impact.	HTL - This policy relates to defence of the railway, it is unlikely that the campsite would be defended apart from through private works and therefore it is likely that part of the campsite would be lost in this epoch. Associated properties will be unaffected and therefore function would be maintained. therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.1	Fishguard and Goodwick	Historic Parks and Gardens	Historic Park and Garden to the south of the Mawddach river,	Historic Environment (Cultural Heritage)	National	MR - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	
11.1		Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	
11.2	Llanrian	Caravan/Holiday Park/Camp Site	Holiday Parks	Population	Regional	MR - Holiday park unlikely to be affected in this epoch. Therefore a neutral impact.	MR - The realignment of the holiday park will lead to some of its area but would not result in the loss of its function. Therefore a neutral impact.	MR - The realignment of the holiday park will lead to some of its area but would not result in the loss of its function. Therefore a neutral impact.	
11.2		Properties	Properties	Population	Regional	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Although the overall policy for this frontage is MR, the properties at risk on the A493 will remain protected as the railway remains protected. Therefore a moderate positive impact.	
11.2	Mathry	Airbase/Airport	Royal Air Base	Material Assets	National	HTL - Airforce base unlikely to be affected in this epoch and protected from flooding. Therefore a major positive impact.	MR - Airforce base unlikely to be affected in this epoch and protected from flooding. Therefore a major positive impact.	MR - Airforce base unlikely to be affected in this epoch and protected from flooding. Therefore a major positive impact.	
11.3	Mathry	Caravan/Holiday Park/Camp Site	Caravan Parks	Population	Local	MR - Under this policy the caravan park would be realigned. Management of this process would enable the function of the caravan park to be maintained. Therefore a minor positive impact.	MR - Under this policy the caravan park would be realigned. Management of this process would enable the function of the caravan park to be maintained. Therefore a minor positive impact.	MR - Under this policy the caravan park would be realigned. Management of this process would enable the function of the caravan park to be maintained. Therefore a minor positive impact.	
11.3	Mathry	Railway	Railway line	Material Assets	National	HTL - The railway will be specifically defended to maintain the transport link. Without intervention the railway line are unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - The railway will be specifically defended to maintain the transport link. Therefore a major positive impact.	HTL - The railway will be specifically defended to maintain the transport link. Therefore a major positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.4		Archaeology	Linear feature	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact .	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
11.4	Llanrian	Railway	Railway line and frontage	Material Assets	Regional	HTL/MR - The main coastal frontage of Fairbourne will be held protecting the railway there. Realignment of the Ro Wen spit is unlikely to affect the railway in this epoch. Without intervention the railway line would not be affected in this epoch. Therefore a neutral impact.	MR - Managed realignment in this epoch will involve relocating people from Fairbourne and as maintaining the defences becomes unsustainable the railway will be at risk. Therefore a moderate negative impact.	NAI - In this epoch it is not considered possible to defend this frontage and it is likely that the railway would be lost. Therefore a moderate negative impact.	Realignment of railway inland.
11.4	Whitchurch	SAM	Anti Invasion defences	Historic Environment (Cultural Heritage)	National	HTL - Site is seaward of defences, however it is unlikely that the site will be significantly affected in this epoch. Therefore a neutral impact.	HTL - Site is seaward of defences, through SLR and erosion of the narrow foreshore the features will be at increased risk in this epoch and are likely to deteriorate. Therefore a moderate negative impact.	HTL - Site is seaward of defences, through SLR and erosion it is likely that the majority of this site will be lost in this epoch. Therefore a major negative impact.	Excavation and recording.
11.4	Whitchurch	Coastal Road	Coastal road	Material Assets	Regional	HTL/MR - The main coastal frontage of Fairbourne will be held protecting the coastal road. Realignment of the Ro Wen spit is unlikely to affect the road in this epoch. With no intervention the road is unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Managed realignment in this epoch will involve relocating people from Fairbourne and as maintaining the defences becomes unsustainable the railway will be at risk. Therefore a moderate negative impact.	NAI - In this epoch it is not considered possible to defend this frontage and it is likely that the railway would be lost. Therefore a moderate negative impact.	Re-alignment of railway.
11.4	Whitchurch	Properties	Properties	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties would start to be lost and people would need to be relocated from Fairbourne in this epoch in preparation for the policy in epoch 3. Therefore a moderate negative impact.	NAI - In this epoch it is not considered possible to defend this frontage and it is likely that the majority of the properties would be lost. Therefore a moderate negative impact.	Provision of alternative housing / space for development of properties.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.4		Slipway and Access	Slipways	Material Assets	Local	HTL - Access to the beach unlikely to be affected in this epoch. Therefore a neutral impact.	MR - access to the beach may still be possible as defences have been maintained in the previous epoch, but the slipway would be deteriorating. Therefore a minor negative impact.	NAI - Access to the beach is likely to be lost in this epoch as defences are abandoned. Therefore a minor negative impact.	
11.5	Dinas	Railway	Penryhn point light railway station	Material Assets	Local	MR - Railway unlikely to be lost in this epoch but would be at increasing risk of inundation. Therefore a neutral impact.	MR - SLR is likely to lead to the loss of the railway station in this epoch as it falls below MHWS. Therefore a minor negative impact.	NAI - Due to SLR the station is very likely to have been lost to regular inundation. Therefore a minor negative impact.	
11.6	Dinas	Footpath	Footpath	Population	Regional	HTL - The embankment along which the public right of way runs will be maintained. If not maintained it is unlikely public rights of way would be affected in this epoch. Therefore a neutral impact.	MR - Realignment in this epoch relates to the relocation of people, the defences would remain and therefore so to would be the public right of way, although the embankment would deteriorate throughout this epoch and the public rights of way are likely to become unsafe. Therefore a moderate negative impact.	NAI - The public right of way will have been lost in the previous epoch. Therefore a moderate negative impact.	Realignment of footpath.
11.8	Dinas	Railway	Viaduct and embankment	Material Assets	National	HTL - The embankment and viaduct would be maintained, ensuring the railway is sustained. Without intervention the embankment and viaduct are unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - The embankment and viaduct would be maintained, ensuring the railway is sustained. Without intervention the embankment and viaduct are unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - The embankment and viaduct would be maintained, ensuring the railway is sustained. Therefore a major positive impact.	
11.9	Fishguard and Goodwick	Properties	Mawddac crescent properties	Population	Local	HTL - Defences will be maintained and the properties will remain protected. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	MR - Within this policy defence to these properties is still feasible. However it will be necessary for realigned defences to protect an access route. It is assume this will occur in conjunction with defence to the railway line. Therefore a minor positive impact.	MR - Properties will remain unaffected if assumptions set out for epoch 2 are implemented. Therefore a minor positive impact.	
11.9	Fishguard	Slipway and Access	Slipways and quays	Material Assets	Local	HTL - Slipway unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Realignment would lead to the loss of the use of the slipway. Therefore a minor negative impact.	MR - Realignment would lead to the loss of the use of the slipway. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.12		Coastal Road	Road bridge	Material Assets	Local	MR - Bridge unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Bridge unlikely to be affected in this epoch. If not maintained deterioration of defences to the north of the bridge would lead to regular inundation of the road north of the bridge, making the bridge redundant. Therefore a minor positive impact.	MR - Bridge unlikely to be affected in this epoch. Therefore a minor positive impact.	
11.13		Properties	Mawddach estuary properties	Population	Local	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	
11.13		Listed Building	Glandwr Hall Cadw listed buildings	Historic Environment (Cultural Heritage)	National	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
11.13	Fishguard and Goodwick	Coastal Road	Road	Material Assets	Regional	MR - This policy includes the provision to defend and raise the road as necessary to maintain access to Barmouth. With no intervention the road would not have been significantly affected in this epoch. Therefore a neutral impact.	MR - This policy includes the provision to defend and raise the road as necessary to maintain access to Barmouth. Therefore a moderate positive impact.	MR - This policy includes the provision to defend and raise the road as necessary to maintain access to Barmouth. Therefore a moderate positive impact.	
11.13	Fishguard	Listed Building	Many cadw listed buildings and Glan y Mawddach Historic Park	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
11.14	Aberystwyth	Harbour / Marina	Barmouth Harbour	Material Assets	Regional	HTL - Harbour defences will be maintained. With no intervention the harbour would not be affected in this epoch. Therefore a neutral impact.	HTL - Harbour defences will be maintained. Therefore a moderate positive impact.	HTL - Harbour defences will be maintained. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.14	Verwig	Properties	Town of Barmouth	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL/MR - The majority of the properties would remain protected, some properties would be lost as part of the realignment of defences at the northern end of the town. Therefore a moderate negative impact.	HTL/MR - The majority of the properties would remain protected, some properties would be lost as part of the realignment of defences at the northern end of the town. Therefore a moderate negative impact.	Relocation of properties.
11.14	New Quay	Lifeboat/ Lifeguard Station	RNLI station	Material Assets	Regional	HTL - Lifeboat station unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Lifeboat station unlikely to be affected in this epoch and the slipway protected from erosion and damage. Therefore a moderate positive impact.	HTL - Lifeboat station unlikely to be affected in this epoch. Therefore a moderate positive impact.	
11.14		Coastal Road	Promenade, coastal road, car parks	Population	National	HTL - Promenade, coastal road and car parks unlikely to be affected in this epoch. Therefore a neutral impact.	HTL/MR - The promenade, coastal road and car parks will remain protected in south Barmouth, however to the north the realignment of defences is likely to lead to the loss of the present promenade and coastal road there. Therefore a moderate negative impact.	HTL/MR - The promenade, coastal road and car parks will remain protected in south Barmouth, however to the north the realignment of defences is likely to lead to the loss of the present promenade and coastal road there. Therefore a moderate negative impact.	Alternative routes exist. Redevelopment of the seafront.
11.15	Llanllwchaiarn	Railway	Railway line	Material Assets	National	HTL - Defences will be maintained and the railway will remain protected. Without intervention the railway line are unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and the railway will remain protected from partial loss and erosion. Therefore a major positive impact.	HTL - Defences will be maintained and the railway will remain protected from erosion and loss. Therefore a major positive impact.	
11.15	Llanllwchaiarn	Properties	Residential properties and coastal road	Population	Local	HTL - Defences will be maintained and the properties will remain protected. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and the properties will remain protected. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and the properties will remain protected. Therefore a minor positive impact.	
11.16	New Quay	Listed Building	Cadw Listed building, Parish Church of St Mary and St Bodfan	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.16	New Quay	Caravan/Holiday Park/Camp Site	Holiday Parks	Population	Local	MR/NAI - Holiday parks unlikely to be affected in this epoch. Therefore a neutral impact.	MR/NAI - Function of the holiday parks likely to be maintained through realignment of the sites. Therefore a minor positive impact.	MR/NAI - Function of the holiday parks likely to be maintained through realignment of the sites. Therefore a minor positive impact.	
11.18		Archaeology	Archaeological feature	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
12.1		Caravan/Holiday Park/Camp Site	Camp sites	Population	National	NAI/HTL - Unlikely to be affected within this epoch. Therefore a neutral impact.	NAI/MR - negligible loss of site area due to coastal erosion in this epoch. Access across the causeway will become tide limited due to SLR. Therefore a minor negative impact.	NAI/MR - negligible loss of site area due to coastal erosion in this epoch. Access across the causeway will become tide limited due to SLR. Therefore a minor negative impact.	Due to the limited loss of area of the site mitigation is not considered necessary.
12.1	New Quay	Coastal Road	Access road	Material Assets	Local	HTL - Road will remain protected. Although if not protected the road would not be affected in this epoch. Therefore a neutral impact.	HTL - Road will remain protected. Therefore a minor positive impact.	HTL - Road will remain protected. Therefore a minor positive impact.	
12.1	Llanllwchaearn	Railway	Bridge embankments	Material Assets	Regional	NAI - Railway bridge embankments will be maintained. Without intervention the railway bridge embankments would be unlikely to have been affected in this epoch. Therefore a neutral impact.	NAI - Railway bridge embankments will be maintained. Therefore a moderate positive impact.	NAI - Railway bridge embankments will be maintained. Therefore a moderate positive impact.	
12.1		Listed Building	Cadw LB bridge	Historic Environment (Cultural Heritage)	National	NAI - Railway bridge listed building will be maintained. Therefore a major positive impact.	NAI - Railway bridge listed building will be maintained. Therefore a major positive impact.	NAI - Railway bridge listed building will be maintained. Therefore a major positive impact.	
12.1		Sewage Works	Sewage works	Material Assets	Local	NAI - Sewage works unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Sewage works may be affected by flooding in this epoch. Therefore a minor negative impact.	NAI - Sewage works likely to be lost to regular flooding in this epoch. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.2		Harbour / Marina	Harbour	Material Assets	Regional	HTL - Unlikely to be affected within this epoch. Therefore a neutral impact.	MR - Unlikely to be affected within this epoch. Access across the causeway will become more limited due to SLR. Therefore a minor negative impact.	MR - Access and use of harbour may be limited with SLR. Therefore a moderate negative impact.	Alternative access or re-location of harbour.
12.2		Harbour / Marina	Sailing club and breakwater	Material Assets	Regional	HTL - Sailing club and breakwater unlikely to be affected in this epoch. Therefore a neutral impact.	MR - It is likely that in allowing the dunes to function naturally the sailing club and breakwater will be affected. Therefore a minor negative impact.	MR - It is likely that the sailing club would be lost in this epoch as part of the realignment. Therefore a moderate negative impact.	Re-location of sailing club.
12.3		Footpath	Footpath	Population	Local	HTL - Access track will remain protected. Therefore a minor positive impact.	MR - Likely that part of the access track will be lost through realignment. Therefore a minor negative impact.	MR - Likely that part of the access track will be lost through realignment. Therefore a minor negative impact.	
12.3		Railway	Pensarn Bridge	Material Assets	National	HTL - Railway bridge will remain protected from flooding. Therefore a major positive impact.	HTL - Railway bridge will remain protected from flooding. Therefore a major positive impact.	HTL - Railway bridge will remain protected from flooding. Therefore a major positive impact.	
12.4		Harbour / Marina	Pensarn Harbour	Material Assets	Regional	HTL - Harbour will remain protected. With no intervention the harbour would not be affected in this epoch. Therefore a neutral impact.	HTL - Harbour will remain protected. Therefore a moderate positive impact.	HTL - Harbour will remain protected. Therefore a moderate positive impact.	
12.5		Listed Building	St Tanwg Church	Historic Environment (Cultural Heritage)	National	MR- Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	MR- Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	MR- Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	Recording.
12.5	Aberaeron	Properties	Properties	Population	Local	HTL - Properties will remain protected in this epoch. Therefore a minor positive impact.	HTL - Properties will remain protected in this epoch. Therefore a minor positive impact.	HTL - Properties will remain protected in this epoch. Therefore a minor positive impact.	
12.5		Archaeology	Standing monument (Early-Medieval)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.5		Archaeology	Building - Ruined (Medieval)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
12.5		Archaeology	Building - Roofed (Modern)	Historic Environment (Cultural Heritage)	Local	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
12.6	Aberaeron	Railway	Railway line	Material Assets	National	HTL - Railway line will remain protected. Without intervention the railway line would not be affected in this epoch. Therefore a neutral impact.	HTL - Railway line will remain protected from loss in this epoch. Therefore a major positive impact.	HTL - Railway line will remain protected from erosion and complete loss. Therefore a major positive impact.	
12.6	Aberaeron	Railway	Railway line	Material Assets	National	NAI/HTL - Railway line unlikely to be affected in this epoch. Therefore a neutral impact.	NAI/HTL - Railway line unlikely to be affected in this epoch and protected from loss due to frequent flooding. Therefore a major positive impact.	NAI/HTL - Railway line unlikely to be affected in this epoch and protected from loss due to frequent flooding. Therefore a major positive impact.	
12.7		Footpath	Footpath	Population	Regional	NAI - Footpath unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Footpath unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Footpath unlikely to be affected in this epoch. Therefore a neutral impact.	
12.9		Railway	Railway line	Material Assets	National	HTL - Railway line unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Railway line unlikely to be affected in this epoch and protected from loss due to frequent flooding. Therefore a major positive impact.	MR - Railway line unlikely to be affected in this epoch and protected from loss due to frequent flooding. Therefore a major positive impact.	
12.9			Pylon	Material Assets	Regional	HTL - Pylon unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Pylon unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Pylon unlikely to be affected in this epoch. Therefore a neutral impact.	
12.12		Footpath	Footpath	Population	Regional	NAI - Public right of way unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - As defences fail and due to SLR path likely to be lost to regular flooding. Therefore a moderate negative impact.	NAI - As defences fail and due to SLR path likely to be lost to regular flooding. Therefore a moderate negative impact.	Realignment of footpath.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.12		Properties	Properties	Population	Local	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Unlikely that defences would be sustainable and therefore assume property would be lost due to high flood risk. Therefore a minor negative impact.	NAI - Unlikely that defences would be sustainable and therefore assume property would be lost due to high flood risk. Therefore a minor negative impact.	
12.10		Listed Building	Pont Briwet	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	Recording.
12.12		Listed Building	Many cadw listed buildings and Portmeirion Historic Park	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings and historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings at risk from erosion are likely to remain protected by local defences. Therefore a neutral impact.	NAI - Listed buildings at risk from erosion are likely to remain protected by local defences. Therefore a neutral impact.	
12.12		Properties	Properties	Population	Local	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	
12.12		Coastal Road	Road and railway line	Material Assets	National	HTL - The Cob would be maintained, and therefore so to would the road and railway line. Without intervention the Cob would not be affected in this epoch and so the road and railway line would be maintained. Therefore a neutral impact.	HTL - The Cob would be maintained, and therefore so to would the road and railway line. Without intervention the Cob would not be affected in this epoch and so the road and railway line would be maintained. Therefore a neutral impact.	HTL - The Cob would be maintained, and therefore so to would the road and railway line which would be protected from erosion and loss. Therefore a major positive impact.	
12.13		Properties	The Cob is an embankment, carrying the railway line across the estuary	Material Assets	Regional	HTL - The Cob would be maintained, and therefore so to would the railway line. Without intervention the Cob would not be affected in this epoch and so the railway line would be maintained. Therefore a neutral impact.	HTL - The Cob would be maintained, and therefore so to would the railway line. Without intervention the Cob would not be affected in this epoch and so the railway line would be maintained. Therefore a neutral impact.	HTL - The Cob would be maintained, and therefore so to would the railway line. Therefore a moderate positive impact.	
12.12		Listed Building	Observatory Tower (sited on the shore-line approximately 300m S of Portmeirion Hotel)	Historic Environment (Cultural Heritage)	National	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	NAI - Erosion may cause the loss of some of the historic feature. Therefore a major negative impact.	Recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.13		Listed Building	Many cadw listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. The listed wharfs are likely to deteriorate due to erosion in this epoch if the defences were not to be maintained. Therefore a major positive impact.	HTL - Listed buildings protected and therefore unlikely to be affected in this epoch. Therefore a major positive impact.	
12.13	Aberaeron	Railway	Railway station	Material Assets	National	HTL - Railway station unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Railway station unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Railway station unlikely to be affected in this epoch and protected from loss due to regular flooding. Therefore a major positive impact.	
12.13	Aberystwyth	Harbour / Marina	Porthmadog harbour and slipway	Material Assets	National	HTL - Use of the harbour unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Use of the harbour unlikely to be affected in this epoch and protected from deterioration. Therefore a major positive impact.	HTL - Use of the harbour unlikely to be affected in this epoch and protected from loss. Therefore a major positive impact.	
12.13	Aberystwyth		Tidal Sluice		Local	HTL - Tidal sluice would be maintained. Therefore a minor positive impact.	HTL - Tidal sluice would be maintained. Therefore a minor positive impact.	HTL - Tidal sluice would be maintained. Therefore a minor positive impact.	
12.13	Aberystwyth	Properties	Properties	Population	Regional	HTL - Defences will be maintained and the properties will remain protected. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	HTL - Properties will remain protected in this epoch. Therefore a moderate positive impact.	HTL - Properties will remain protected in this epoch. Therefore a moderate positive impact.	
12.13	Aberystwyth	Coastal Road	Coastal road	Material Assets	Regional	HTL - The road will remain protected maintaining access. With no intervention access would not be affected in this epoch. Therefore a neutral impact.	HTL - The road will remain protected maintaining access. Therefore a moderate positive impact.	HTL - The road will remain protected maintaining access. Therefore a moderate positive impact.	
12.15	Aberystwyth	Beach	Borth y Gest Beach	Population	Local	NAI - Function of the beach unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Function of the beach unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion will lead to loss of part of the beach but the function will be maintained. Therefore a neutral impact.	
12.16	Aberystwyth	Beach	Beach	Population	Local	MR - Function of the beach unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Function of the beach unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Function of the beach unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.16	Aberystwyth	Slipway and Access	Access road and slipway	Material Assets	Regional	MR - Access to the beach unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Access to the beach unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Access to the beach unlikely to be affected in this epoch and the slipway protected from erosion. Therefore a moderate positive impact.	
12.17		Railway	Railway line	Material Assets	National	HTL - Railway line unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Railway line will be maintained, but may need to be realigned. Therefore a major negative impact.	MR - Railway line will be maintained, but may need to be realigned. Therefore a major negative impact.	Realignment of railway inland.
12.18	Aberystwyth	Car Park	Car park	Population	Regional	HTL - Car park unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Car park unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Car park unlikely to be affected in this epoch. Therefore a neutral impact.	
12.18	Aberystwyth	Slipway and Access	Esplanade slipway and road	Material Assets	Regional	HTL - Access unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Access unlikely to be affected in this epoch and road and slipway protected from erosion and loss. Therefore a moderate positive impact.	MR - Road and slipway likely to be lost as part of the realignment in this epoch. Therefore a moderate negative impact.	Realignment of road and slipway.
12.18		Listed Building	Castle Street (Old Castle)	Historic Environment (Cultural Heritage)	National	HTL - The listed building in unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - The listed building in unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Erosion may cause damage or loss of some of the historic feature. Therefore a minor negative impact.	Recording.
12.19		Listed Building	Cadw listed building, Morannedd Café	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch as protected from erosion. Therefore a major positive impact.	HTL - Listed building unlikely to be affected in this epoch as protected. Therefore a major positive impact.	
12.19		Properties	Properties on cliffside	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	
12.19		SAM	Criccieth Castle SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site likely to be affected in this epoch. Therefore a major negative impact.	NAI - Part of the historic site likely to be lost to erosion in this epoch. Therefore a major negative impact.	Excavation and recording.
12.19		Properties	Properties to the west of Criccieth	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a moderate positive impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.19		Coastal Road	Road and promenade	Material Assets	Regional	HTL - Road and promenade unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Road and promenade unlikely to be affected in this epoch and majority of promenade and road protected from erosion and loss. Therefore a moderate positive impact.	HTL - Road and promenade unlikely to be affected in this epoch and majority of promenade and road protected from erosion and loss. Therefore a moderate positive impact.	
12.21		Properties	Properties to the west, toward Penychain	Population	Local	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties likely to be lost to erosion in this epoch. Therefore a minor negative impact.	NAI - Properties likely to be lost to erosion in this epoch. Therefore a minor negative impact.	
12.22		Beach	Beach	Population	Local	MR - Spit will be maintained in this epoch. Therefore a neutral impact.	NAI - Spit will be maintained in this epoch. Therefore a neutral impact.	NAI - Spit will be maintained in this epoch. Therefore a neutral impact.	
12.22		Railway	Railway line	Material Assets	National	HTL - Railway line unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Railway line will be maintained, but may need to be realigned. Therefore a major negative impact.	MR - Railway line will be maintained, but may need to be realigned. Therefore a major negative impact.	Realignment of railway.
12.25		Caravan/Holiday Park/Camp Site	Holiday park	Population	Regional	NAI - Holiday park unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Likely that local defences to protect the holiday park will be allowed. Therefore a moderate positive impact.	NAI - Likely that local defences to protect the holiday park will be allowed. Therefore a moderate positive impact.	
13.1		Caravan/Holiday Park/Camp Site	Sands holiday park	Population	Regional	HTL - The holiday park is unlikely to be affected in this epoch. Therefore a neutral impact.	MR - The holiday park is unlikely to be affected in this epoch, although increasing flood risk needs to be managed. Therefore a neutral impact.	MR - The holiday park is unlikely to be affected in this epoch, although increasing flood risk needs to be managed. Therefore a moderate positive impact.	
13.1		Caravan/Holiday Park/Camp Site	Holiday park	Population	Regional	HTL - The holiday park is unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Realignment would lead to the loss of some of the holiday park, but in a controlled manner and allowing for sustainable future defence to the remainder of the site. Therefore a moderate positive impact.	MR - Realignment would lead to the loss of some of the holiday park, but in a controlled manner and allowing for sustainable future defence to the remainder of the site. Therefore a moderate positive impact.	
13.3		Properties	Properties behind beach	Population	Regional	HTL - The naturally developing dune system will continue to protect these properties. Therefore a neutral impact.	HTL - The naturally developing dune system will continue to protect these properties. Therefore a neutral impact.	HTL - The naturally developing dune system will continue to protect these properties. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.4		Harbour / Marina	Marina/ Harbour	Material Assets	Regional	HTL - Defences will be maintained and the harbour will not be lost. Without intervention the harbour would not be lost in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and the harbour will not be lost. Therefore a moderate positive impact.	HTL - Defences will be maintained and the harbour will not be lost. Therefore a moderate positive impact.	
13.4		Caravan/Holiday Park/Camp Site	Carreg yr Imbill Holiday park	Population	Regional	HTL - Defences will be maintained and the holiday park will remain protected. Holiday park unlikely to be affected in this epoch if defences not maintained. Therefore a neutral impact.	HTL - Defences will be maintained and the holiday park will remain protected. If not maintained failure of the current defences would threaten part of the holiday park but not to the extent that its overall function would be lost. Therefore a minor positive impact.	HTL - Defences will be maintained and the holiday park will remain protected from loss in this epoch. Therefore a moderate positive impact.	
13.4		Listed Building	Various Cadw Listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Defences to Pwllheli will be maintained and so the listed buildings will be unaffected and protected from flooding. Therefore a major positive impact.	
13.4		Properties	Frontage settlement and Agricultural Land within the valley of the Afon Penrhos	Population	Regional	HTL - Defences to Pwllheli will be maintained and so the properties will be unaffected. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	HTL - Defences to Pwllheli will be maintained and so the properties will be unaffected. Therefore a moderate positive impact.	HTL - Defences to Pwllheli will be maintained and so the properties will be unaffected. Therefore a moderate positive impact.	
13.4		Coastal Road	A449 Coastal Road	Material Assets	Regional	HTL - Defences to Pwllheli will be maintained and so the properties will be unaffected. Without intervention the properties would be unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Defences to Pwllheli will be maintained and so the properties will be unaffected. Therefore a moderate positive impact.	HTL - Defences to Pwllheli will be maintained and so the properties will be unaffected. Therefore a moderate positive impact.	
13.7		Listed Building	Cadw listed building	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed building may be lost due to tidal inundation in this epoch as the Penrhos valley is flooded. Therefore a major negative impact.	Recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.7		Footpath	Footpath	Population	Regional	HTL - Public right of way unlikely to be affected in this epoch. Therefore a neutral impact.	MR - As the new mouth for the Afon Penrhos is created the public right of way will be lost. Therefore a moderate negative impact.	MR - As the new mouth for the Afon Penrhos is created the public right of way will be lost. Therefore a moderate negative impact.	Realignment of footpath.
13.8		Archaeology	Stone built feature	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
13.9		Properties	Coastal properties	Population	Regional	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	
13.9		Listed Building	Foxhole' Cadw listed building	Historic Environment (Cultural Heritage)	National	NAI - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	
13.9		Archaeology	Earthwork	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
13.11		Properties	Settlement	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL/MR - Realignment would involve opening up the Afon Soch to tidal influence, all properties would remain defended or be unaffected by this. Therefore a moderate positive impact.	HTL/MR - Realignment would involve opening up the Afon Soch to tidal influence, all properties would remain defended or be unaffected by this. Therefore a moderate positive impact.	
13.14		Slipway and Access	Beach houses , slipways and car park	Material Assets	Regional	HTL - Beach houses and access to the beach unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Access to the beach unlikely to be affected in this epoch. Use of beach houses may be at risk due to coastal recession. Therefore a mixed impact.	NAI - Access to the beach unlikely to be affected in this epoch. However beach houses likely to have been lost due to recession of the coastline. Therefore a mixed impact.	
13.18		SAM	Pared Mawr Camp SAM	Historic Environment (Cultural Heritage)	National	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - SAM likely to be lost to coastal recession in this epoch. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.19		SAM	Burial Chamber SAM	Historic Environment (Cultural Heritage)	National	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	
14.1		Archaeology	Find only	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
14.2		Footpath	Footpath, access	Population	Regional	NAI - Access to the beach is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - There may be some erosion of the footpath where it meets the beach, however this is unlikely to affect access. Therefore a neutral impact.	NAI - There may be some erosion of the footpath where it meets the beach, however this is unlikely to affect access. Therefore a neutral impact.	
14.5		Listed Building	Listed Buildings and Historic park to the west of Porth Neigwl	Historic Environment (Cultural Heritage)	National	NAI - Listed building / historic garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building / historic garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion may affect part of the historic park and garden in this epoch. Therefore a major negative impact.	Recording.
14.6		Archaeology	Archaeological feature	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
14.7		Telephone Exchange	Telephone Exchange	Material Assets	Local	NAI - Telephone exchange at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	NAI - Telephone exchange at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	NAI - Telephone exchange at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	
14.8		Properties	St Hywyns church	Population	Regional	HTL - The existing defence would be maintained in this epoch, protecting the church and graveyard. If not maintained the current defences are unlikely to fail in this epoch and therefore the church and graveyard would remain protected. Therefore a neutral impact.	MR - The proposed realignment includes the intent to protect the church and graveyard, allowing this to be done in a more sustainable way. Therefore a moderate positive impact.	HTL - the new realigned configuration of the shoreline would include defence to the church and graveyard. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
14.8		Listed Building	Cadw listed buildings of aberdaron	Historic Environment (Cultural Heritage)	National	HTL - The existing defence would be maintained in this epoch, protecting the listed buildings. Although if not maintained the current defences would not fail in this epoch. The impact is therefore assessed as neutral.	MR - The proposed realignment includes the intent to protect the core of the village including the listed buildings. Therefore a major positive impact.	HTL - the new realigned configuration of the shoreline would include defence to the core of the village including the listed buildings. Therefore a major positive impact.	
14.8		Properties	Properties	Population	Regional	HTL - The existing defence would be maintained in this epoch, protecting the properties. If not maintained the current defences are unlikely to fail in this epoch and therefore the properties will remain protected. Therefore a neutral impact.	MR - The proposed realignment includes the intent to protect the core of the village. Therefore a moderate positive impact.	HTL - the new realigned configuration of the shoreline would include defence to the core of the village. Therefore a moderate positive impact.	
14.9		Slipway and Access	Slipway	Material Assets	Local	NAI - The functioning of the slipway is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - The functioning of the slipway is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion, accelerated by SLR may lead to loss of the slipway in this epoch, however this is uncertain. Therefore a minor negative impact.	
14.9		Archaeology	Archaeological feature	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
14.11		Slipway and Access	Car Park and beach access	Material Assets	Regional	NAI - Access to the beach is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Access to the beach is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion may lead to loss of part of the car park in this epoch reducing access to the beach. Therefore a moderate negative impact.	Re-alignment of car park and beach access.
15.1		SAM	St Marys Church SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic feature unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	NAI - Historic feature unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	NAI - Historic feature unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
15.1		Slipway and Access	Car park and beach access	Material Assets	Regional	NAI - Access to the beach is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Access to the beach including the slipway may start to come under pressure from erosion as the shoreline retreats. Within the policy of NAI there is the acceptance that local management of this access can occur. Therefore a minor positive impact.	NAI - Access to the beach including the slipway will be under pressure from erosion as the shoreline retreats. Within the policy of NAI there is the acceptance that local management of this access can occur. This may include relocation of the slipway to a more sustainable position. Therefore a minor positive impact.	
15.1		Listed Building	Cadw listed building 'Penyborth'	Historic Environment (Cultural Heritage)	National	NAI - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	
15.1		Car Park	Car park and road	Population	Local	NAI - Car park unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	NAI - Part of the car park may be lost in this epoch through cliff erosion. Therefore a minor negative impact.	NAI - Car park likely to be lost to erosion in this epoch. Therefore a minor negative impact.	
15.1		Footpath	Footpath	Population	Local	NAI - Footpath unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Footpath may need to be relocated due to erosion and SLR. Therefore a minor negative impact.	NAI - Footpath likely to be lost where it descends to the beach, and would require relocating. Therefore a minor negative impact.	
15.1		Listed Building	Lime Kiln cadw listed building	Historic Environment (Cultural Heritage)	National	NAI - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building likely to have been lost in this epoch. Therefore a major negative impact.	Recording.
15.1		Lifeboat/ Lifeguard Station	RNLI station	Material Assets	Regional	NAI - Lifeboat station unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Lifeboat station unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Lifeboat station will require some local protection in this epoch, which is assumed to be possible. Therefore a moderate positive impact.	
15.1		Listed Building	Cadw listed building 'Hendafarn'	Historic Environment (Cultural Heritage)	National	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	Recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
15.1	St David's	Historical	Disused quarry	Historic Environment (Cultural Heritage)	Local	NAI - Disused quarry unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Disused quarry may experience some loss due to erosion in this epoch. Therefore a minor negative impact.	NAI - Disused quarry will experience further loss due to erosion in this epoch. Therefore a minor negative impact.	
15.1		Archaeology	Earthwork	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
15.1		Archaeology	Stone built feature (Medieval)			NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
15.1		Archaeology	Find only			NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
15.1		Archaeology	Building - Ruined (Medieval)			NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
15.2		Archaeology	Natural feature (Prehistoric)	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
15.2		Archaeology	Find only	Historic Environment (Cultural Heritage)	Local	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
15.2	St David's	Listed Building	Cadw listed Building 'White Hall'	Historic Environment (Cultural Heritage)	National	HTL - Defences will be maintained, protecting the listed building. Listed buildings not affected in this epoch. Therefore a neutral impact.	MR - It is expected that the village and hence the listed building can be maintained in this epoch. Listed buildings not affected in this epoch. Therefore a neutral impact.	MR - Due to SLR the village would not be sustainable in this epoch and hence it is likely that the listed building would be lost. Therefore a major negative impact.	Recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
15.2	Granston	Properties	Properties	Population	Local	HTL - Defences will be maintained and the properties will remain protected. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	MR - It is expected that the village can be maintained in this epoch. Therefore a minor positive impact.	MR - Due to SLR the village would not be sustainable in this epoch and properties would be lost. Therefore a minor negative impact.	
15.2	Fishguard	Properties	Properties	Population	Local	HTL - Defences will be maintained and the properties will remain protected. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	HTL - Defences to properties at the beach would be maintained in this epoch. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	MR - Defences would become unsustainable in this epoch and therefore properties would be lost. Therefore a minor negative impact.	
15.3	Nevern	Properties	Properties	Population	Local	HTL - Defences to properties at the beach would be maintained in this epoch. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	HTL - Defences to properties at the beach would be maintained in this epoch. Therefore a minor positive impact.	MR - The realignment will provide for defence to be maintained to the harbour area and other properties at risk. Therefore a minor positive impact.	
15.4	Nevern	Caravan/Holiday Park/Camp Site	Campsite and caravan park	Population	Local	NAI - Caravan and camping park unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Caravan and camping park unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Part of the Caravan and camping park likely to be lost to erosion, however function will be maintained. Therefore a minor negative impact.	
15.4	Borth	Historical	Bachwen Burial Chamber	Historic Environment (Cultural Heritage)	Local	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
15.4		Archaeology	Cartographic	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
15.5		Pier	Pier	Material Assets	Local	MR - Pier unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Piers unlikely to be maintained and would fail in this epoch. Therefore a minor negative impact.	MR - Piers unlikely to be maintained and would fail in this epoch or the previous. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
15.5		Car Park	Access road and car park	Population	Regional	MR - Access to the beach to maintain the amenity function will be maintained. Therefore a neutral impact.	MR - Access to the beach to maintain the amenity function will be maintained. However current car park and road may be partly lost. Therefore a minor negative impact.	MR - Access to the beach to maintain the amenity function will be maintained. However current car park and road may be partly lost. Therefore a minor negative impact.	
15.6		Properties	Village properties	Population	Local	MR - The natural defence provided to the properties by the shingle bank will be maintained. Without intervention it is unlikely properties would be affected in this epoch. Therefore a neutral impact.	MR - The natural defence provided to the properties by the shingle bank will be maintained. Without intervention it is unlikely properties would be affected in this epoch. Therefore a neutral impact.	MR - In this epoch the frontline properties are likely to start to be affected due to SLR. Therefore a minor negative impact.	
15.6		Car Park	Car park	Population	Local	MR - Car park unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Car park unlikely to be affected in this epoch. Therefore a neutral impact.	MR - it is likely that the car park would start to be lost in this epoch. Therefore a minor negative impact.	
15.1 - 15.5		Landscape of Outstanding Historic Interest	Landscape of Outstanding Historic Interest	Historic Environment (Cultural Heritage)	National	Policies have the potential to influence the historic environmental setting. Therefore a minor negative impact.	Policies have the potential to influence the historic environmental setting. Therefore a minor negative impact.	Policies have the potential to influence the historic environmental setting. Therefore a minor negative impact.	
16.1		Beach	Beach houses	Population	Local	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties likely to be affected in this epoch by erosion. Therefore a minor negative impact.	NAI - Properties likely to be lost in this epoch to erosion. Therefore a minor negative impact.	
16.1		Properties	Trout Farm	Population	Regional	NAI - Fish farm unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Fish farm unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion could affect the ponds closest to the beach resulting in some reduction of pond area. Therefore a minor negative impact.	Relocation of affected ponds.
16.1		Historic Parks and Gardens	Bodorgan historic parks and gardens	Historic Environment (Cultural Heritage)	National	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	
16.1		SAM	Tywyn y Parc promontory fort SAM	Historic Environment (Cultural Heritage)	National	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - SAM may experience some loss due to erosion in this epoch. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.2	St Brides	Boating / Shipyards	Boatyard	Material Assets	Local	NAI - Within this policy private defence of the boat yard is allowed for. Therefore a minor positive impact.	NAI - Within this policy private defence of the boat yard is allowed for. Therefore a minor positive impact.	NAI - Within this policy private defence of the boat yard is allowed for. Therefore a minor positive impact.	
16.2	St Brides	Historic Parks and Gardens	Plas Rhianfa, park	Historic Environment (Cultural Heritage)	National	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - It is assumed that localised private defences would be allowed to protect the historic park and garden. Therefore a minor positive impact.	NAI - It is assumed that localised private defences would be allowed to protect the historic park and garden. Therefore a minor positive impact.	
16.3	Walton West	Properties	Properties, coastal road	Population	Local	HTL - Properties and access unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties and access unlikely to be affected in this epoch. Therefore a minor positive impact.	MR - Properties in the lower part of the village are likely to be lost in this epoch to a combination of erosion and flood risk. Therefore a minor negative impact.	
16.3	Haroldston West	SAM	Scheduled Ancient Monument and SSSI	Historic Environment (Cultural Heritage)	National	HTL - The policy aim is to manage transition between Dinas Dinlle Head and open coast with the intent to manage flood risk to village on higher ground. Although there may be some slowing of erosion to the headland it is likely erosion would still continue to erode the cliffs and parts of the historic features. Therefore a major negative impact.	MR - The policy aim is to manage transition between Dinas Dinlle Head and open coast with the intent to manage flood risk to village on higher ground. Although there may be some slowing of erosion to the headland it is likely erosion would still continue to erode the cliffs and parts of the historic features. Therefore a major negative impact.	MR - The policy aim is to manage transition between Dinas Dinlle Head and open coast with the intent to manage flood risk to village on higher ground. Although there may be some slowing of erosion to the headland it is likely erosion would still continue to erode the cliffs and parts of the historic features. Therefore a major negative impact.	Excavation and recording.
16.3	Nolton	SAM	Ogwyn Fish Weir SAM	Historic Environment (Cultural Heritage)	National	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	
16.4	Nolton	Airbase/Airport	Airfield	Material Assets	Regional	MR/HTL - Airfield function unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Airfield function could be affected by occasional flooding and restricted access. Therefore a minor negative impact.	MR/NAI - Airfield function likely to be affected in this epoch. Therefore a moderate negative impact.	Relocation of the airfield, or adaptation of airfield structures and functions to cope with increased flooding (e.g. elevation of key assets).

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.4	Nolton	Listed Building	Fort Belan LB	Historic Environment (Cultural Heritage)	National	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Policy allows for listed building to remain protected subject to normal approvals. Therefore a neutral impact.	
16.4	Nolton	Listed Building	Cadw listed building Fort Beland and dock (including dockside buildings)	Historic Environment (Cultural Heritage)	National	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Policy allows for listed building to remain protected subject to normal approvals. Therefore a major positive impact.	NAI - Policy allows for listed building to remain protected subject to normal approvals. Therefore a major positive impact.	Assumed this is the dock
16.5	Brawdy	Caravan/Holiday Park/Camp Site	Morfa Lodge and caravan site	Population	Local	HTL - Function of caravan and camping park unlikely to be affected. Therefore a neutral impact.	MR - Function of caravan and camping park unlikely to be affected. Therefore a neutral impact.	NAI - Function of caravan and camping park likely to be lost as SLR leads to the majority of the site being below MHWS. Therefore a minor negative impact.	
16.5	St David's	Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch and are protected from erosion and flooding. Therefore a minor positive impact.	MR - As defences become unsustainable several properties are likely to be lost to regular flooding. Therefore a minor negative impact.	
16.6	Whitchurch	Coastal Road	Coastal Road	Material Assets	Local	HTL - Access unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Access unlikely to be affected in this epoch. Therefore a minor positive impact.	NAI - Road likely to start to be impacted and access would be affected. Therefore a minor negative impact.	
16.6		Listed Building	Yr Uncorn, LB	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building likely to start to be impacted. Therefore major negative impact.	Recording.
16.6		Properties	Coastal farms and properties	Population	Local	NAI - It is assumed that localised private defences would be allowed to protect the properties. If not protected properties would not be affected in this epoch. Therefore a neutral impact.	NAI - It is assumed that localised private defences would be allowed to protect the properties. Therefore a minor positive impact.	NAI - It is assumed that localised private defences would be allowed to protect the properties. Therefore a minor positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.7	Whitchurch	Footpath	Footpath	Population	Local	NAI - Access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Access likely to be reduced due to SLR leading to regular flooding. Therefore a minor negative impact.	NAI - Access likely to be reduced due to SLR leading to regular flooding. Therefore a minor negative impact.	
16.8		SAM	St Dwynwens Church SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	
16.8	St David's	Listed Building	Former lighthouse keepers and pilots properties, lighthouse and tower LBs	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
16.9	St David's	Properties	Properties	Population	Local	HTL - Properties will remain protected. Therefore a neutral impact.	HTL - Properties will remain protected from regular flooding. Therefore a minor positive impact.	HTL - Properties will remain protected from flooding and erosion in this epoch. Therefore a minor positive impact.	
16.11	St David's	SAM	Cored Gwyrfaï Fish Weir SAM	Historic Environment (Cultural Heritage)	National	HTL - Historic site located beyond coastal defences. Affected by natural processes. Therefore a neutral impact.	HTL - Historic site located beyond coastal defences. Affected by natural processes. Therefore a neutral impact.	MR - Historic site located beyond coastal defences. Affected by natural processes. Therefore a neutral impact.	
16.11	St David's	Listed Building	Llanfaglan Lime Kiln Listed Building	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed building unlikely to be affected in this epoch. MR would protect listed building from regular flooding in this epoch as it would be below MHWs. Therefore a moderate positive impact.	
16.11		Boating / Shipyards	Small boat yard and car park	Material Assets	Local	HTL - Boat storage and car park unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Boat storage and car park unlikely to be affected in this epoch and protected from erosion and flooding. Therefore a minor positive impact.	MR - As defences become unsustainable car park likely to be lost to regular flooding. Boat storage should be maintained. Therefore a minor negative impact.	
16.11	Mathry	Coastal Road	Coastal Road	Material Assets	Regional	HTL - Road unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Road unlikely to be affected in this epoch and protected from erosion and partial loss. Therefore a moderate positive impact.	MR - Road unlikely to be maintained in this epoch due to SLR leading to unsustainable defences. Therefore a moderate negative impact.	Realignment of road access.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.11	Granston	Golf Course	Golf Course	Population	Regional	HTL - Golf course unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Golf course unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Golf course unlikely to be affected in this epoch. Therefore a neutral impact.	
16.12	Fishguard and Goodwick	Footpath	Foot bridge	Population	Local	HTL - Access unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Access unlikely to be affected in this epoch. Therefore a minor positive impact.	HTL/MR - Access unlikely to be affected in this epoch. Therefore a minor positive impact.	
16.12	Fishguard	Car Park	Car park	Population	Regional	HTL - Car park unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Car park unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Car park unlikely to be affected in this epoch. Therefore a neutral impact.	
16.12	Fishguard	Listed Building	Cadw listed buildings, Essential Settings, Castle and Town Walls	Historic Environment (Cultural Heritage)	National	HTL - All historic features will remain protected. Feature unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - All historic features will remain protected from erosion including the castle. Therefore a major positive impact.	HTL - All historic features will remain protected from erosion including the castle. Therefore a major positive impact.	
16.12	Fishguard	SAM	Caernarfon Castle	Historic Environment (Cultural Heritage)	National	HTL - All historic features will remain protected. Feature unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - All historic features will remain protected from erosion including the castle. Therefore a major positive impact.	HTL - All historic features will remain protected from erosion including the castle. Therefore a major positive impact.	
16.12	Fishguard and Goodwick	Harbour / Marina	Quay	Material Assets	Regional	HTL - Quay will be maintained in this epoch. With no intervention the quay is unlikely to have been affected in this epoch. Therefore a neutral impact.	HTL - Quay will be maintained in this epoch. Therefore a moderate positive impact.	HTL - Quay will be maintained in this epoch. Therefore a moderate positive impact.	
16.12	Fishguard and Goodwick	Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch and are protected from loss due to erosion and flooding. Therefore a minor positive impact.	HTL - Properties unlikely to be affected in this epoch and are protected from loss due to erosion and flooding. Therefore a minor positive impact.	
16.12	Fishguard	Footpath	Footpath and cycle track	Population	Regional	HTL/NAI - Public right of way will be maintained in this epoch. Therefore a moderate positive impact.	HTL/NAI - Public right of way will be maintained in this epoch. Therefore a moderate positive impact.	HTL/NAI - Public right of way will be maintained in this epoch. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.13	Dinas	Listed Building	Church of St Mary Cadw listed building	Historic Environment (Cultural Heritage)	National	NAI - Feature unlikely to be affected by erosion during epoch 1. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 2. Therefore a neutral impact.	NAI - Feature unlikely to be affected by erosion during epoch 3. Therefore a neutral impact.	
16.13	NEWPORT	Boating / Shipyards	Plas Menai Water sports centre	Material Assets	Regional	NAI - Water sports centre unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Local defences to protect the water sports centre are likely to be maintained. Therefore a moderate positive impact.	NAI - Local defences to protect the watersports centre are likely to be maintained. Therefore a moderate positive impact.	
16.13	NEWPORT	SAM	Promontory Fort 'Dinas Camp' SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic feature unlikely to be affected by erosion in this epoch. Therefore a neutral impact.	NAI - Erosion may start to impact upon the historic site in this epoch. Therefore a major negative impact.	NAI - Erosion is likely to lead to the loss of part of the historic site in this epoch. Therefore a major negative impact.	Excavation and recording.
16.14	NEWPORT	Harbour / Marina	Marinas and docks	Material Assets	Regional	HTL - Marina and docks will remain protected. Without intervention the function of the marine would not be lost in this epoch. Therefore a neutral impact.	HTL - Marina and docks will remain protected. Therefore a moderate positive impact.	HTL - Marina and docks will remain protected. Therefore a moderate positive impact.	
16.14	Newport	Listed Building	Yfelinheli LB	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building protected from loss in this epoch. Therefore a major positive impact.	
16.14	Nevern	Listed Building	Many cadw listed buildings situated along menai straits and along nant y garth river	Historic Environment (Cultural Heritage)	National	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Listed dock system protected from flooding. Therefore a moderate positive impact.	HTL - Listed building unlikely to be affected in this epoch. Listed dock system protected from flooding. Therefore a moderate positive impact.	
16.15		Archaeology	Archaeological feature	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
16.15	Nevern	Properties	Settlement	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a moderate positive impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.15	Dinas	Listed Building	Well preserved late 16th century walled and terraced garden including some listed structures	Historic Environment (Cultural Heritage)	Regional	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic park and garden unlikely to be affected in this epoch, however listed building and boathouse listed buildings likely to be lost to erosion. Therefore a major negative impact.	Recording.
16.15	Dinas	Listed Building	Britannia Tubular Bridge	Historic Environment (Cultural Heritage)	National	NAI - Bridge unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Bridge unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Bridge unlikely to be affected in this epoch. Therefore a neutral impact.	
16.16	St Dogmaels Rural	Caravan/Holiday Park/Camp Site	Caravan Park	Population	Local	MR - Function of caravan park unlikely to be affected in this epoch as dunes would continue to provide flood defence. Therefore a neutral impact.	MR - Function of caravan park unlikely to be affected in this epoch as dunes would continue to provide flood defence. Therefore a neutral impact.	MR - Dunes unlikely to be able to provide necessary flood defence over this epoch, so caravan park will need to be adapted to maintain its function. If not protected function of caravan park would be lost in this epoch due to high flood risk. Therefore a minor positive impact.	
16.16	St Dogmaels Rural	Listed Building	Statue, and coastal properties, all LBs	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Nelson's Statue may be affected in this epoch due to SLR and erosion. Therefore a major negative impact.	Recording.
16.16	Bridge to Barras	Archaeology	Enclosure (Castle Gwylan)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
16.16	St Dogmaels Rural	Slipway and Access	Slipway and boat park	Material Assets	Regional	NAI - It is assumed that localised private defences would be allowed to protect the access for boating/recreation. If not protected access is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - It is assumed that localised private defences would be allowed to protect the access for boating/recreation. If not protected access is unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - It is assumed that localised private defences would be allowed to protect the access for boating/recreation. Therefore a minor positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.16	Aberystwyth	Listed Building	Plas Newydd	Historic Environment (Cultural Heritage)	National	NAI - It is assumed that localised private defences would be allowed to protect the listed buildings. Therefore a neutral impact.	NAI - It is assumed that localised private defences would be allowed to protect the listed buildings. Therefore a neutral impact.	NAI - It is assumed that localised private defences would be allowed to protect the listed buildings. Therefore a neutral impact.	
16.16	Llanina	Historic Parks and Gardens	Landscaped 18th century park, Bryn yr Hen Bobl Burial Chamber and listed buildings	Historic Environment (Cultural Heritage)	National	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion will start to affect the historic park and garden near the estuary. Therefore a neutral impact.	
16.16	Llanina	Slipway and Access	Slipways and Jetties	Material Assets	Local	NAI - Access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion is likely to lead to deterioration of the slipway and loss of access. In addition regular flooding will be an issue. Therefore a minor negative impact.	NAI - Access likely to be lost in this epoch due to erosion and regular flooding. Therefore a minor negative impact.	
16.16		Listed Building	Castell Gwylan LB	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
16.16	New Quay	Listed Building	Listed buildings and Historic park and garden located on the nw shore of the straits	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings and Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings and Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings and Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	
16.18	Llanllwchaearn	Properties	Ynys Gored Goch	Population	Regional	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	
16.16		Listed Building	Bridge over stream near Melin Pwll-fanogl	Historic Environment (Cultural Heritage)	National	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	
16.18	Llanddewi Aberarth Upper	SAM	Coed M'r fish weir, Gorad Ddu fish weir SAMs	Historic Environment (Cultural Heritage)	National	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.18	Llanfair Bay	Archaeology	Terraced Ground (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
16.19	Aberaeron	Coastal Road	Telford Menai suspension bridge	Material Assets	Regional	NAI - Bridge unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Bridge unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Bridge unlikely to be affected in this epoch. Therefore a neutral impact.	
16.19		Properties	Properties	Population	Local	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties may be affected by flooding in this epoch. Therefore a minor negative impact.	
16.19		Listed Building	Many listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. The Foundry would be protected. Therefore a major positive impact.	HTL - Listed buildings unlikely to be affected in this epoch. Both the Foundry and Prince's Pier Wharf would be protected from erosion. Therefore a major positive impact.	
16.19		Properties	Coastal Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch and are protected from loss due to erosion and flooding. Therefore a minor positive impact.	HTL - Properties unlikely to be affected in this epoch and are protected from loss due to erosion and flooding. Therefore a minor positive impact.	
16.20		Listed Building	Milestone by Gallows Point	Historic Environment (Cultural Heritage)	National	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	
16.21	Llanddewi Aberarth Upper	Historic Parks and Gardens	Historic gardens, castle and listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Historic features unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Historic features unlikely to be affected in this epoch. Therefore a neutral impact.	MR - The defences to the listed buildings will remain through realignment of the Green. Given the topography between the castle and shore it is unlikely that any near shore disturbance could be seen from the castle. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.21	Llansantffraid	World Heritage Site	Beaumaris Castle	Historic Environment (Cultural Heritage)	International and National	HTL - Historic features unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Historic features unlikely to be affected in this epoch. Therefore a neutral impact.	MR - The defences to the listed buildings will remain through realignment of the Green. Given the topography between the castle and shore it is unlikely that any near shore disturbance could be seen from the castle. Therefore a neutral impact.	
16.22	Aberystwyth	Pier	Pier	Material Assets	Local	HTL - Pier unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Pier unlikely to be affected in this epoch and will be protected from erosion. Therefore a minor positive impact.	MR - Pier unlikely to be affected in this epoch. Therefore a minor positive impact.	
16.22	Aberystwyth	Lifeboat/ Lifeguard Station	RNLI Station	Material Assets	Regional	HTL - Lifeboat station unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Lifeboat station unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Lifeboat station unlikely to be affected in this epoch. Therefore a neutral impact.	
16.22	Borth	Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch and are protected from loss due to erosion and flooding. Therefore a minor positive impact.	MR - Properties unlikely to be affected in this epoch and are protected from loss by erosion and flooding. Therefore a minor positive impact.	
16.22	Borth	Coastal Road	Coastal road and properties	Population	Local	NAI - Properties and road unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - It is assumed that localised private defences would be allowed to protect the road and properties. Therefore a minor positive impact.	NAI - It is assumed that localised private defences would be allowed to protect the road and properties. Therefore a minor positive impact.	
16.25	Borth	Pier	Pier	Material Assets	National	HTL - Pier unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Pier unlikely to be affected in this epoch and protected from loss of access due to erosion. Therefore a major positive impact.	HTL - Pier unlikely to be affected in this epoch and protected from loss of access due to erosion. Therefore a major positive impact.	
16.25		SAM	Gorad Friars Bach fish weir, Aberleiniog fish weir I and II and treacastell fish weir SAM	Historic Environment (Cultural Heritage)	National	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	NAI - SAMs in intertidal zone, affected by natural processes. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.25		SAM	Site of friary SAM	Historic Environment (Cultural Heritage)	National	HTL - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Historic site protected from erosion in this epoch. Therefore a major positive impact.	HTL - Historic site protected from erosion in this epoch. Therefore a major positive impact.	
16.25		Lifeboat/ Lifeguard Station	Coastguard station	Material Assets	Local	NAI - Coastguard station unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Coastguard station unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Coastguard station unlikely to be affected in this epoch. Therefore a neutral impact.	
16.25		Boating / Shipyards	Landing stage	Material Assets	Local	NAI - Landing stage unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Landing stage may suffer some damage due to erosion in this epoch. Therefore a minor negative impact.	NAI - Landing stage likely to be lost to erosion in this epoch. Therefore a minor negative impact.	
16.25		Coastal Road	Penmon Coastal road	Material Assets	Regional	NAI - Access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - The road is likely to be lost in part to erosion. Therefore a moderate negative impact.	NAI - The road is likely to be lost to erosion. Therefore a moderate negative impact.	Road will need to be realigned to maintain access.
16.25		Archaeology	Motte (Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
16.25		Archaeology	Findspot (Neolithic)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
16.25		Archaeology	Quarry (Post-Medieval, Medieval)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
16.25		Listed Building	Garth Jetty	Historic Environment (Cultural Heritage)	National	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.26		Listed Building	Low lying cadw listed buildings And 'Pier Camp' SAM	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings and SAM unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings and SAM unlikely to be affected in this epoch. Two listed buildings (Pier and Garth Jetty) would be protected. Therefore a major positive impact.	HTL/MR - Realignment may lead to loss of some listed buildings on Seiriol Road. Therefore a major negative impact.	Recording.
16.26		Properties	City of Bangor Properties	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch and those at Garth Point protected. Therefore a moderate positive impact.	HTL/MR - Due to high flood risk defences will be realigned and it is likely that some properties will be lost. Therefore a moderate negative impact.	Relocation of properties.
16.26		Protected Wreck	Pwll Fannog, wreck	Historic Environment (Cultural Heritage)	National	NAI - This policy would have no impact on this feature. Therefore a neutral impact.	NAI - This policy would have no impact on this feature. Therefore a neutral impact.	NAI - This policy would have no impact on this feature. Therefore a neutral impact.	
16.29		Harbour / Marina	Tidal Harbour	Material Assets	National	HTL - Harbour will remain protected. Without intervention the harbour would not be affected into his epoch. Therefore a neutral impact.	HTL - Harbour will remain protected from erosion and loss of quay walls. Therefore a major positive impact.	HTL - Harbour will remain protected from loss. Therefore a major positive impact.	
16.29		Listed Building	Historic Park Penrhyn Castle	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch and would be protected. Therefore a major positive impact.	HTL - Listed buildings unlikely to be affected in this epoch and would be protected. Therefore a major positive impact.	
16.31		Historic Parks and Gardens	Penrhyn Castle Historic Park	Historic Environment (Cultural Heritage)	National	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	
16.31		Historic Parks and Gardens	Bryn y Neuadd Historic Park	Historic Environment (Cultural Heritage)	National	MR/HTL - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	MR/HTL - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	MR/HTL - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	
16.31		Railway	Railway line	Material Assets	National	HTL - Railway unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Railway unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Railway unlikely to be affected in this epoch and protected from erosion west of Llanfairfechan. Therefore a major positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.31		Archaeology	Cobbled Surface	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
16.31		Listed Building	Bridge at the mouth of the Afon Ogwen (partly in Llaniltechid community)	Historic Environment (Cultural Heritage)	Local	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	NAI - Listed building may be damaged or lost in this epoch through erosion of the cliffs. Therefore a major negative impact.	
16.32		Listed Building	One of two cottages, cadw listed building	Historic Environment (Cultural Heritage)	National	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	
16.33		Listed Building	Cadw listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch and protected from erosion. Therefore a major positive impact.	
16.33		Properties	Properties	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a moderate positive impact.	MR - Some properties likely to be lost as part of the realignment. Therefore a moderate negative impact.	Provision of alternative land for property development or relocation.
17.1		Car Park	Car park and access road	Population	Local	MR - Access to beach unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Access to beach should be maintained in this epoch as the intention is to maintain access to the properties. Therefore a minor positive impact.	NAI - Access to beach likely to be affected in this epoch as maintenance of the current defences becomes unsustainable. Therefore a minor negative impact.	
17.1		Properties	Services to properties	Population	Local	HTL - Services to properties are unlikely to be at risk from erosion or flooding due to SLR in this epoch. Therefore a neutral impact.	MR - Realignment may lead to the loss of some services which would need to be re-routed. Therefore a minor negative impact.	MR - Realignment may lead to the loss of some services which would need to be re-routed. Therefore a minor negative impact.	
17.1		Beach	Sea Wall along northern section of beach	Population	Local	MR - Access unlikely to be affected in this epoch. Therefore a neutral impact.	MR - As wall is allowed to fail access is likely to be lost in part in this epoch. Therefore a minor negative impact.	NAI - As wall has failed access is likely to have been lost in this epoch. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.3		Listed Building	There are a few listed buildings, and a bridge that is a SAM in this town	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings and SAM unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected, SAM will experience flooding but would not be lost. Therefore a minor negative impact.	MR - SAM and one listed building may be lost due to the frequency of inundation in this epoch. Therefore a major negative impact.	Recording.
17.4		SAM	Trwyn Du round cairn SAM	Historic Environment (Cultural Heritage)	National	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - SAM unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - SAM at risk of occasional flooding in this epoch, but unlikely to be significantly affected. Therefore a minor negative impact.	
17.4		Listed Building	Church of St Cwyfan LB	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building at risk of occasional flooding in this epoch, but unlikely to be significantly affected. Therefore a minor negative impact.	
17.4			Motor racing school		Regional	NAI - Motor school unlikely to be affected in this epoch. Therefore neutral impact.	NAI - Motor school unlikely to be affected in this epoch. Therefore neutral impact.	NAI - Motor school unlikely to be affected in this epoch. Therefore neutral impact.	
17.4		Coastal Road	Car park and coastal road	Population	Local	NAI - Road unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Road unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Road unlikely to be affected in this epoch. Therefore a neutral impact.	
17.5		SAM	Barclodiad y Gawres Burial chamber and Mynydd Bach round cairn SAMs	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	
17.5		Listed Building	Tyn Towyn cottage LB	Historic Environment (Cultural Heritage)	National	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building may be affected by erosion in this epoch, and its setting will be disturbed. Therefore a major negative impact.	Recording.
17.5		Properties	Properties	Population	Local	MR - Properties unlikely to be affected in this epoch, as private defences would be sustainable. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch, as private defences would be sustainable. Therefore a minor positive impact.	NAI - Properties likely to be lost in this epoch as defences become unsustainable due to SLR and pressure from erosion. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.5		Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch as defences are maintained. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch as defences are maintained. Therefore a minor positive impact.	MR - Properties unlikely to be affected by the realignment in this epoch. Therefore a minor positive impact.	
17.7		Listed Building	Stretch of sea wall at surf point, LB	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building would be protected from damage and loss due to erosion in this epoch. Therefore a major positive impact.	MR - Listed building unlikely to be lost as part of the realignment in this epoch and would be protected from loss by erosion. Therefore a major positive impact.	
17.7		Airbase/Airport	RAF base	Material Assets	National	NAI - RAF training base unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - RAF training base unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Some assets close to the shoreline may be at risk but it is assumed that their function could be relocated without loss of the base. Therefore a minor negative impact.	Relocate at risk assets elsewhere within the base grounds.
17.9		Listed Building	Rhoscolyn Lookout station listed building	Historic Environment (Cultural Heritage)	National	MR - This policy relates to the management of the bays. Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - This policy relates to the management of the bays. Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - This policy relates to the management of the bays. Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
17.9		SAM	Ffynnon Gwenfaen well, SAM	Historic Environment (Cultural Heritage)	National	MR - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	
17.9		Caravan/Holiday Park/Camp Site	Caravan parks and campsites	Population	Local	MR - Function of the caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Function of the caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Function of the caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	
17.9		Listed Building	Porth y Castell Listed building	Historic Environment (Cultural Heritage)	National	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
17.9		Listed Building	Craig y Mor Listed building	Historic Environment (Cultural Heritage)	National	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.12	Dale	Coastal Road	Coastal road	Material Assets	Regional	HTL - Defences will be maintained ensuring that the road and access are kept. Without intervention the road would not be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained ensuring that the road and access are kept. Therefore a moderate positive impact.	HTL - Defences will be maintained ensuring that the road and access are kept. Therefore a moderate positive impact.	
17.12	Dale	Properties	Properties	Population	Local	HTL - Defences will be maintained and the properties will remain protected. If defences not maintained properties would not be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained ensuring that the properties are protected from flood loss. Therefore a minor positive impact.	HTL - Defences will be maintained ensuring that the properties are protected from loss by erosion and flood risk. Therefore a minor positive impact.	
17.13	Dale	Coastal Road	Coastal road	Material Assets	Regional	HTL - Defences will be maintained and the road will not be affected. Without intervention the road would not be affected in this epoch. Therefore a neutral impact.	HTL - Defences will be maintained and the road will not be affected. Therefore a moderate positive impact.	HTL - Defences will be maintained and the road will not be affected. Therefore a moderate positive impact.	
17.14	Dale	Listed Building	Old customs post listed building	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
17.14	Marloes	SAM	Dinas Porth Ruffydd SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	
17.14	St Brides	Listed Building	Ellens Tower listed building	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
17.14		Listed Building	South Stack lighthouse	Historic Environment (Cultural Heritage)	National	NAI - Listed building and access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building and access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed building and access unlikely to be affected in this epoch. Therefore a neutral impact.	
17.14	St Brides	Listed Building	Fog Signal Station	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.15	St Brides	Listed Building	Settlement and listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Defences will be maintained and the listed buildings will remain protected. Without being maintained the current defences would not have failed in this epoch and the listed buildings are unlikely to be affected. Therefore the impact is assessed as neutral.	HTL - Defences will be maintained and the listed buildings will remain protected from flooding. Therefore minor positive impact.	HTL - Defences will be maintained and the listed buildings will remain protected from erosion. Therefore a major positive impact.	
17.15	St Brides	Harbour / Marina	Holyhead harbour old and new	Material Assets	National	HTL - Defences will be maintained and the harbour will remain protected. Without intervention the harbour would not be affected into his epoch. Therefore a neutral impact.	HTL - Defences will be maintained and the harbour will remain protected. Therefore a major positive impact.	HTL - Defences will be maintained and the harbour will remain protected. Therefore a major positive impact.	
17.15	St Brides	Listed Building	Harbour, many listed buildings and historical features	Historic Environment (Cultural Heritage)	National	HTL - Defences will be maintained and the listed buildings will remain protected. Without being maintained the current defences would not have failed in this epoch and the listed buildings are unlikely to be affected. Therefore the impact is assessed as neutral.	HTL - Defences will be maintained and the listed buildings will remain protected from flooding. Therefore minor positive impact.	HTL - Defences will be maintained and the listed buildings will remain protected from erosion. Therefore a major positive impact.	
17.19		SAM	Ynys Leurad Hut circles SAM	Historic Environment (Cultural Heritage)	National	MR - Historic sites unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic site may be affected by SLR in this epoch leading to deterioration. Therefore a major negative impact.	MR - Historic site likely to be affected by SLR in this epoch leading to loss. Therefore a major negative impact.	Excavation and recording.
17.19	Talbenny	Listed Building	Four Mile Bridge, LB	Historic Environment (Cultural Heritage)	National	MR - Defence to the bridge will be maintained to maintain access to Holy Island, so historic site will be unaffected. Therefore a neutral impact.	MR - Defence to the bridge will be maintained to maintained access to Holy Island, so historic site will be protected from deterioration. Therefore a moderate positive impact.	MR - Defence to the bridge will be maintained to maintained access to Holy Island, so historic site will be protected from loss. Therefore a major positive impact.	
17.19	Talbenny	SAM	Feilin Carnau Tide Mill, Felin Wen tide mill and bodior tide mill SAM	Historic Environment (Cultural Heritage)	National	MR - Historic sites unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic sites unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic sites likely to be lost due to SLR in this epoch. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.19	Talbenny	Properties	Coastal/ estuarine properties	Population	Local	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Some properties likely to be affected by SLR in this epoch. Therefore a minor negative impact.	MR - Additional properties are likely to be affected by SLR in this epoch. Therefore a minor negative impact.	
17.19	Talbenny	Coastal Road	Bridge and embankment	Material Assets	Regional	MR - Defence to the bridge will be maintained to maintain access to Holy Island. Without intervention access is unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Defence to the bridge will be maintained to maintain access to Holy Island. Therefore a moderate positive impact.	MR - Defence to the bridge will be maintained to maintain access to Holy Island. Therefore a moderate positive impact.	
17.19	Afon Alaw	Railway	Embankment	Material Assets	National	HTL - Embankment will be maintained allowing access to be kept. Without intervention the embankment is unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Embankment will be maintained allowing access to be kept. Without intervention the embankment is unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Embankment will be maintained allowing access to be kept. Therefore a major positive impact.	
17.19	Afon Alaw	Listed Building	Stanley Embankment	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed building protected from deterioration in this epoch. Therefore a major positive impact.	
17.19		Archaeology	Mooring Ring	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
17.19		Archaeology	Tide Mill	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
17.2	Aberffraw	Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties may be lost to flooding in this epoch. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.21	Newlands Park	Listed Building	Listed buildings	Historic Environment (Cultural Heritage)	National	MR - Properties unlikely to be affected in this epoch as erosion will be slowed. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch as erosion will be slowed. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch as erosion will be slowed and properties are protected from erosion loss. Therefore a major positive impact.	Recording.
17.21	Valley C	SAM	Newlands Fish Weir SAM	Historic Environment (Cultural Heritage)	National	MR - Historic sites unlikely to be affected in this epoch. Therefore a neutral impact.	MR - SLR is likely to start to lead to the deterioration of the historic site. Therefore a major negative impact.	MR - SLR is likely to lead to the loss of the historic site. Therefore a major negative impact.	Excavation and recording.
17.23	Holyhead Bay	Properties	Coastal farms/properties	Population	Local	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties may be affected by erosion in this epoch, however the plan allows for local defences if required. Therefore a minor positive impact.	
18.1	Porth Delysg	Caravan/Holiday Park/Camp Site	Caravan and campsite	Population	Local	NAI - Function of the caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Function of the caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Function of the caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	
18.1	Porth Swtan	Footpath	Footpath	Population	Local	NAI - Footpath unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Footpath unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion is likely to lead to the loss of most of the footpath in this epoch. Therefore a minor negative impact.	
18.1	Porth y Felin	Historic Parks and Gardens	Cestyll historic park and listed buildings	Historic Environment (Cultural Heritage)	National	NAI - Historic park and garden and listed building likely to be affected in this epoch. Therefore a major negative impact.	NAI - Historic park and garden and listed building likely to be affected in this epoch. Therefore a major negative impact.	NAI - Listed building likely to be affected by erosion in this epoch. Therefore a major negative impact.	None available other than recording.
	Twyn Cliperau to Wylfa Head	Archaeology	Ridge and Furrow (Medival)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
	Twyn Cliperau to Wylfa Head	Archaeology	Corm Mill	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
18.3	Tre Fadog	SAM	Castell SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site likely to be affected in this epoch by erosion. Therefore a major negative impact.	Excavation and recording.
18.3	Porth Trefadog	Listed Building	Anglesey LB close to the coast	Historic Environment (Cultural Heritage)	National	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
18.3	Porth Trefadog	Properties	Coastal properties	Population	Local	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Some properties likely to be lost due to erosion and flooding in this epoch. Therefore a minor negative impact.	
18.4	Porth Trwyn	Properties	Coastal properties	Population	Local	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Some properties likely to be lost due to erosion in this epoch. Therefore a minor negative impact.	
18.5	Porth Swtan	Sewage Works	Access road onto beach	Population	Local	NAI - Access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion is likely to lead to erosion of the slipway and partial loss of access in this epoch. Therefore a minor negative impact.	NAI - Erosion is likely to lead to the total loss of access in this epoch. Therefore a minor negative impact.	
18.7	Porth y Galen-ddu		Wylfa Power Station	Material Assets	National	HTL - Power station unlikely to be affected. Therefore a neutral impact.	HTL - Power station unlikely to be affected. Therefore a neutral impact.	HTL - Power station unlikely to be affected and protected. Therefore a major positive impact.	
18.8	Cemaes Bay	Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a minor positive impact.	MR - Properties unlikely to be affected in this epoch. Therefore a minor positive impact.	
18.13	Llanbargrig Point	Listed Building	Church of St Padrig Anglesey LB	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
18.13	Llanlleiana Head	SAM	Dinas Gynfor Hill fort SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
18.13	Porthllechog	Coastal Road	Coastal road and properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a minor positive impact.	MR - Some properties are likely to be lost as a result of the realignment. Therefore a minor negative impact.	
18.13	Port Lynas	Listed Building	Point Lynas lighthouse and telegraph station, Anglesey LBs	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
18.13	Port Lynas	Boating / Shipyards	Lighthouse	Material Assets	Regional	NAI - Lighthouse unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Lighthouse unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Lighthouse unlikely to be affected in this epoch. Therefore a neutral impact.	
18.13	Trwyn y Parc to Trwyn Cwmryd	Archaeology	Well	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
18.14	Porth Wen	SAM	Porth Wen brickworks SAM	Historic Environment (Cultural Heritage)	National	MR - Historic sites unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic sites unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site likely to be affected by erosion and flooding in this epoch. Therefore a major negative impact.	Excavation and recording.
18.14	Porth Wen Brickworks	Archaeology	Brickworks	Historic Environment (Cultural Heritage)	National	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
18.16		Treatment Plant	SWT	Material Assets	Local	MR - SWTreatment plant at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	MR - SWTreatment plant at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	MR - SWTreatment plant at risk of erosion in some locations due to erosion of the cliffs. Therefore a minor negative impact.	
18.17	Amlwch	Harbour / Marina	Harbour	Material Assets	Regional	HTL - Function of harbour is unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Function of harbour is unlikely to be affected in this epoch. Therefore a moderate positive impact.	HTL - Function of harbour is unlikely to be affected in this epoch. Therefore a moderate positive impact.	
18.17	Amlwch	Listed Building	Many Anglesey listed buildings	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
18.18	Porth Eilean	Beach	Beach and Slipway	Population	Local	HTL - Access unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Access may be affected by erosion in this epoch. Therefore a minor negative impact.	
19.2	Dulas Bay	Properties	Coastal Properties	Population	Local	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Properties unlikely to be affected in this epoch. Therefore a minor positive impact.	NAI - Property likely to be affected by erosion in this epoch. Therefore a minor negative impact.	
19.3	Treath Dulas	Protected Wreck	Wreck	Historic Environment (Cultural Heritage)	National	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a neutral impact.	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a neutral impact.	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a neutral impact.	
19.3	Lligwy Bay	Car Park	Car parks and beach access	Population	Local	NAI - Car park and access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Car park and access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Car park and access unlikely to be affected in this epoch. Therefore a neutral impact.	
19.3	Lligwy Bay	Airbase/Airport	Beach			NAI - Beach unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Beach unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Beach unlikely to be affected in this epoch. Therefore a neutral impact.	
19.3	Lligwy Sands	SAM	Traeth Lligwy Fish Weir SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a major negative impact.	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a major negative impact.	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a major negative impact.	Excavation and recording.
19.4	Moelfre	Lifeboat/ Lifeguard Station	RNLI Station	Material Assets	Regional	MR - It is assumed that the lifeboat station would remain protected. Without intervention the lifeboat station would not be affected in this epoch. Therefore a neutral impact.	MR - It is assumed that the lifeboat station would remain protected. Therefore a moderate positive impact.	MR - It is assumed that the lifeboat station would remain protected. Therefore a moderate positive impact.	
19.4	Moelfre	Properties	Coastal properties and coastal road	Population	Regional	MR/HTL/NAI - Properties are unlikely to be affected in this epoch. Therefore a neutral impact.	MR/HTL/NAI - Properties are unlikely to be affected in this epoch and some properties are protected from erosional loss. Therefore a moderate positive impact.	MR/NAI - Properties are unlikely to be affected in this epoch and some properties protected from erosional loss. Therefore a moderate positive impact.	
19.7	Treath Bycham	Properties	Coastal properties and caravan parks	Population	Local	MR - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion and SLR likely to lead to loss of some properties in this epoch. Therefore a minor negative impact.	NAI - Erosion and SLR likely to lead to loss of some properties in this epoch. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
19.7	Traeth Bychan	Listed Building	Lime Kilns, Anglesey Listed buildings	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings may be affected by erosion in this epoch. Therefore a major negative impact.	NAI - Listed buildings may be affected by erosion in this epoch. Therefore a major negative impact.	Recording.
19.9	Traeth Bychan	Slipway and Access	Slipway and boat park	Material Assets	Local	NAI - Access and boat storage unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Access and boat storage unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Boat storage likely to be affected by erosion in this epoch. Beach access will not be affected. Therefore a minor negative impact.	
19.9	Benllech	Caravan/Holiday Park/Camp Site	Caravan Park	Population	Local	NAI - Function of caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Function of caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Function of caravan and camp site unlikely to be affected in this epoch. Therefore a neutral impact.	
19.9	Benllech	Properties	Benllech town properties	Population	Local	HTL - Properties unlikely to be affected by in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected by in this epoch. Therefore a minor positive impact.	MR - Properties unlikely to be affected by in this epoch. Therefore a minor positive impact.	
19.11	Benllech	Sewage Works	Sewage treatment works	Material Assets	Local	NAI - Sewage works unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Sewage works unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Sewage works unlikely to be affected in this epoch. Therefore a neutral impact.	
19.11	Red Wharf Bay	Caravan/Holiday Park/Camp Site	St Davids campsite and caravan park	Population	Local	NAI/HTL - Function of caravan park unlikely to be affected in this epoch. Therefore a neutral impact.	NAI/HTL - Function of caravan park unlikely to be affected in this epoch. Therefore a neutral impact.	NAI/MR - Function of caravan park unlikely to be affected in this epoch. Therefore a neutral impact.	
19.14	Red Wharf Bay	Listed Building	Anglesey LB bridge	Historic Environment (Cultural Heritage)	National	MR - Listed building unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Due to SLR listed building is likely to be affected in this epoch. Therefore a major negative impact.	MR - Listed building likely to be lost in this epoch. Therefore a major negative impact.	Recording.
19.14	Red Wharf Bay	Properties	Coastal cottages	Population	Local	MR - Property unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Property unlikely to be affected in this epoch and protected from erosion. Therefore a minor positive impact.	MR - Property unlikely to be affected in this epoch and protected from erosion and loss. Therefore a minor positive impact.	
19.15	Red Wharf Bay	Access	Access points and footpaths	Population	Local	NAI - Access unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Access may be affected by SLR and erosion in this epoch, but unlikely to be lost. Therefore a neutral impact.	NAI - Access likely to be lost in this epoch due to SLR and erosion. Therefore a minor negative impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
19.15	Red Wharf Bay	Properties	Llandonna beach, coastal properties	Population	Local	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - One property likely to be lost to erosion in this epoch. Therefore a minor negative impact.	
19.15	Red Wharf Bay	SAM	Llandonna Fish Weir SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a major negative impact.	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a major negative impact.	NAI - Historic site likely to deteriorate due to SLR in this epoch. Therefore a major negative impact.	Excavation and recording.
19.16	Trwyn Du Lighthouse	Listed Building	Anglesey LB, lighthouse, situated in the strait between Black point and puffin island	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
19.16	Penmon Point	Listed Building	Anglesey LB lighthouse keepers houses	Historic Environment (Cultural Heritage)	National	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
20.1	Llanfairfechan	Coastal Road	A55 Chester to Bangor expressway	Material Assets	Regional	HTL - Road unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Road unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Road unlikely to be affected in this epoch. Therefore a moderate positive impact.	
20.1	Deganwy	Golf Course	Golf Course	Population	Local	HTL - Golf facilities unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Golf facilities unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Golf facilities may be affected as defences are realigned. Therefore a minor negative impact.	
20.2	Penmaenmawr	Railway	Railway line	Material Assets	National	HTL - Railway line unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Railway line unlikely to be affected in this epoch and parts of the railway at Dwygyfylchi protected from loss. Therefore a major positive impact.	HTL - Railway line unlikely to be affected in this epoch and protected from regular flooding and loss. Therefore a major positive impact.	
20.2	Penmaenmawr	Coastal Road	A55 Chester to Bangor expressway	Material Assets	Regional	HTL - Road unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Road unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Road unlikely to be affected in this epoch. Therefore a moderate positive impact.	
20.2	Penmaenmawr	Properties	Properties	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Properties to the seaward edge of the A55 protected from erosion. Therefore a moderate positive impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a moderate positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.2	Dwygyfylchi	Sewage Works	Sewage works	Material Assets	Regional	HTL - Sewage plant unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Sewage plant unlikely to be affected in this epoch and protected from erosion. Therefore a moderate positive impact.	HTL - Sewage plant unlikely to be affected in this epoch and protected from erosion and loss. Therefore a moderate positive impact.	
20.3	Conwy	Caravan/Holiday Park/Camp Site	Caravan site	Population	Local	HTL - Caravan and camping park unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Caravan and camping park unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Caravan and camping park unlikely to be affected in this epoch. Therefore a neutral impact.	
20.3	Conwy	Golf Course	Golf Course	Population	Local	HTL - Function of golf course unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Function of golf course unlikely to be affected in this epoch. Therefore a neutral impact.	MR/HTL - Function of golf course unlikely to be affected in this epoch. Therefore a neutral impact.	
20.3	Conwy	Harbour / Marina	Marina	Material Assets	Local	HTL - Marina unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Marina unlikely to be affected in this epoch and protected from regular flooding. Therefore a minor positive impact.	HTL - Marina unlikely to be affected in this epoch and protected from loss. Therefore a minor positive impact.	
20.3	Llandudno	Coastal Road	A55 Chester to Bangor expressway	Material Assets	National	HTL - Road unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Road unlikely to be affected in this epoch and tunnel protected from loss due to flooding. Therefore a major positive impact.	MR - Road unlikely to be affected in this epoch and protected from regular flooding and loss. Therefore a major positive impact.	
20.5	Conwy	Properties	Properties	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch and some protected from erosion. Therefore a moderate positive impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a moderate positive impact.	
20.5	Afon Conwy	Properties	Conwy Harbour, floating pontoons	Population	Local	HTL - Under this policy the function of the pontoons is likely to be maintained and given their nature are unlikely to be affected by the policy. Therefore a neutral impact.	HTL - Under this policy the function of the pontoons is likely to be maintained and given their nature are unlikely to be affected by the policy. Therefore a neutral impact.	HTL - Under this policy the function of the pontoons is likely to be maintained and given their nature are unlikely to be affected by the policy. Therefore a neutral impact.	
20.5	Afon Conwy	Coastal Road	Three bridges crossing river	Material Assets	National	HTL - Bridges unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Bridges unlikely to be affected in this epoch and protected from erosion and lack of maintenance. Therefore a major positive impact.	HTL - Bridges unlikely to be affected in this epoch. Therefore a major positive impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.6	Conwy	Listed Building	Various listed buildings, Historic Park, Castle, SAM and essential settings	Historic Environment (Cultural Heritage)	National	HTL - Historic sites and listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Historic sites and listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic sites and listed buildings unlikely to be affected in this epoch. Some listed buildings protected from loss to erosion. Therefore a major positive impact.	
20.8	Llandudno	Properties	Llandudno Town	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch and protected from flooding. Therefore a moderate positive impact.	MR - Properties unlikely to be affected in this epoch and protected from flooding and erosion. Therefore a moderate positive impact.	
20.8	Afon Conwy	Coastal Road	Conwy tunnel entrances	Material Assets	National	HTL - Tunnel unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Road unlikely to be affected in this epoch and tunnel protected from loss due to flooding. Therefore a major positive impact.	MR - Road unlikely to be affected in this epoch and protected from regular flooding and loss. Therefore a major positive impact.	
20.8	Deganwy	Properties	Deganwy town properties	Population	Regional	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL/MR - Properties unlikely to be affected in this epoch and protected from erosion and regular flooding. Therefore a moderate positive impact.	MR - Properties unlikely to be affected in this epoch and protected from erosion and regular flooding. Therefore a moderate positive impact.	
20.11	Great Orme	Properties	Coastal Properties	Population	Local	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Properties are at risk from erosion in this epoch but it is assumed that local defences will be allowed to protect them. Therefore a minor positive impact.	
20.11	West Shore and Golf Course	Archaeology	Cave (Post-Medieval)	Historic Environment (Cultural Heritage)	Local	HTL - Archlogical site and it's setting maintained as defences are held. Therefore a neutral impact.	HTL - Archaeological site and it's setting maintained as defences are held. Therefore a neutral impact.	MR - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
20.12	Gogarth	SAM	Gogarth Grange SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Erosion is likely to lead to the loss of part of the historic site in this epoch. Therefore a major negative impact.	HTL - Erosion is likely to lead to the loss of more of the historic site in this epoch. Therefore a major negative impact.	Excavation and recording.

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.13	Great Orme Head	Archaeology	Gun Emplacement (modern)	Historic Environment (Cultural Heritage)	Local	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	NAI - Erosion may cause damage or loss of the undesignated archaeological findings. Therefore a minor negative impact.	
20.14	Ty'n y groes	SAM	Bryn Castell SAM	Historic Environment (Cultural Heritage)	National	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Historic site unlikely to be affected in this epoch. Therefore a neutral impact.	
20.15	Llansanffraid Glan Conwy	Railway	Railway line	Material Assets	National	HTL - Railway line unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Railway line unlikely to be affected in this epoch and protected from flooding and erosion. Therefore a major positive impact.	HTL - Railway line unlikely to be affected in this epoch and protected from loss by erosion and regular flooding. Therefore a major positive impact.	
20.15	Deganwy	Listed Building	Various Listed buildings	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL/MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
20.16	Tal y Cafn	Railway	Road and railway line	Material Assets	National	HTL - Road and railway line unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Road and railway line will be maintained as part of the realignment. Therefore a major positive impact.	MR - Road and railway line will be maintained as part of the realignment. Therefore a major positive impact.	
20.16	Llansanffraid Glan Conwy	Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch and protected from flooding and erosion. Therefore a minor positive impact.	HTL - Properties unlikely to be affected in this epoch and protected from flooding and erosion. Therefore a minor positive impact.	
20.16	Conwy river	Listed Building	Bryn Eisteddfod LB	Historic Environment (Cultural Heritage)	National	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	
20.17	Afon Conwy	Properties	Properties	Population	Local	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Properties unlikely to be affected in this epoch. Therefore a neutral impact.	
20.17	Bodnant Garden	Historic Parks and Gardens	Historic Garden	Historic Environment (Cultural Heritage)	National	HTL - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	HTL - Historic park and garden unlikely to be affected in this epoch. Therefore a neutral impact.	

PDZ Unit	Location	Type	Feature	Corresponding SEA Feature	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.19	Canovirm Roman Fort	SAM	SAM, Historic Park and Garden and Listed building	Historic Environment (Cultural Heritage)	National	HTL - Historic site, historic park and garden and listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	MR - Historic site, historic park and garden and listed buildings unlikely to be affected in this epoch. Therefore a neutral impact.	NAI - Part of the historic site, and historic park and garden likely to be affected by flooding in this epoch. Therefore a moderate negative impact.	Excavation and recording. No mitigation for risk to historic parks and garden other than recording.

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SM79800389			Iron Age	LITTLE CASTLE POINT	Hillfort	1.1	NAI	NAI	NAI
SM79800389			Neolithic,Mesolithic	LITTLE CASTLE POINT	Flint working site	1.1	NAI	NAI	NAI
SM79800389			Mesolithic	LITTLE CASTLE POINT	Findspot	1.1	NAI	NAI	NAI
SM7980398			Bronze Age;Prehistoric	LITTLE CASTLE POINT	Round barrow,Burnt mound	1.1	NAI	NAI	NAI
SM78550884			Post-Medieval	WELSH WAY	Trackway	1.1	NAI	NAI	NAI
SM80511151			Unknown	THE FALLS	Field system	1.1	NAI	NAI	NAI
SM80821174			Post-Medieval	WAREY HAVEN	Culvert	1.1	NAI	NAI	NAI
SM816571233			Post-Medieval	Lime Kiln at Mill Haven	Lime kiln	1.1	NAI	NAI	NAI
SM81661246			Iron Age	BROADMOOR RATH;MILLHAVEN CAMP	Hillfort	1.1	NAI	NAI	NAI
SM81811262			Modern	DUTCH GIN	Sculpture	1.1	NAI	NAI	NAI
SM80511151			Unknown	THE FALLS	Field system	1.1	NAI	NAI	NAI
SM79800389			Iron Age	LITTLE CASTLE POINT	Hillfort	1.1	NAI	NAI	NAI
SM79800389			Neolithic,Mesolithic	LITTLE CASTLE POINT	Flint working site	1.1	NAI	NAI	NAI
SM79800389			Mesolithic	LITTLE CASTLE POINT	Findspot	1.1	NAI	NAI	NAI
SM7980398			Bronze Age;Prehistoric	LITTLE CASTLE POINT	Round barrow,Burnt mound	1.1	NAI	NAI	NAI
SM78550884			Post-Medieval	WELSH WAY	Trackway	1.1	NAI	NAI	NAI
SM80511151			Unknown	THE FALLS	Field system	1.1	NAI	NAI	NAI
SM80821174			Post-Medieval	WAREY HAVEN	Culvert	1.1	NAI	NAI	NAI
SM816571233			Post-Medieval	Lime Kiln at Mill Haven	Lime kiln	1.1	NAI	NAI	NAI
SM81661246			Iron Age	BROADMOOR RATH;MILLHAVEN CAMP	Hillfort	1.1	NAI	NAI	NAI
SM81811262			Modern	DUTCH GIN	Sculpture	1.1	NAI	NAI	NAI
SM802109			Early medieval	ST BRIDES	Inscribed stone	1.2	NAI	NAI	NAI
SM80231094			Medieval,Early medieval	ST BRIDES CHAPEL;CLIFF COTTAGES	Chapel	1.2	NAI	NAI	NAI
SM80211094			Early medieval	ST BRIDES CIST CEMETERY	Cemetery	1.2	NAI	NAI	NAI
SM80211094			Early medieval	ST BRIDES CIST CEMETERY	Cemetery	1.2	NAI	NAI	NAI
SM802109			Early medieval	ST BRIDES	Inscribed stone	1.2	NAI	NAI	NAI
SM802211092			Post-Medieval	Lime Kiln at St Brides Haven	Lime kiln	1.2	NAI	NAI	NAI
SM80231094			Medieval,Early medieval	ST BRIDES CHAPEL;CLIFF COTTAGES	Chapel	1.2	NAI	NAI	NAI
SM80211094			Early medieval	ST BRIDES CIST CEMETERY	Cemetery	1.2	NAI	NAI	NAI
SM85151243			Post-Medieval	LITTLE HAVEN	Culm pit	2.1	NAI	NAI	NAI
SM84011255			Post-Medieval	GOULTROP ROADS	Cottage	2.1	NAI	NAI	NAI
SM85151243			Post-Medieval	LITTLE HAVEN	Culm pit	2.1	NAI	NAI	NAI
SM84011255			Post-Medieval	GOULTROP ROADS	Cottage	2	NAI	NAI	NAI
SM85112157			Prehistoric	PINCH COTTAGE	Burnt mound	2.10	MR	MR	MR
SM84802220			Post-Medieval	NEWGALE	Cottage	2.11	MR	MR	NAI
SM84962192			Post-Medieval	NEWGALE	Sand pit	2.11	MR	MR	NAI
SM84802220			Post-Medieval	NEWGALE	Cottage	2.11	MR	MR	NAI
SM84322290			Prehistoric	CWM MAWR	Findspot	2.13	NAI	NAI	NAI
SM84002308			Post-Medieval	CWM BACH	Quarry	2.13	NAI	NAI	NAI
SM840231			Neolithic	CWM-BACH	Findspot	2.13	NAI	NAI	NAI
SM84322290			Prehistoric	CWM MAWR	Findspot	2.13	NAI	NAI	NAI
SM84322290			Prehistoric	CWM MAWR	Findspot	2.13	NAI	NAI	NAI
SM84002308			Post-Medieval	CWM BACH	Quarry	2.13	NAI	NAI	NAI
SM840231			Neolithic	CWM-BACH	Findspot	2.13	NAI	NAI	NAI
SM85711293			Post-Medieval,Modern	LITTLE HAVEN	Bridge	2.2	HTL	HTL	MR
SM85731297			Post-Medieval,Modern	LITTLE HAVEN	Sea defences	2.2	HTL	HTL	MR
SM857129			Post-Medieval	LITTLE HAVEN	Village	2.2	HTL	HTL	MR
SM85711293			Post-Medieval,Modern	LITTLE HAVEN	Bridge	2.2	HTL	HTL	MR
SM85731297			Post-Medieval,Modern	LITTLE HAVEN	Sea defences	2.2	HTL	HTL	MR
SM85811339			Modern		Defence post	2.3	NAI	NAI	NAI
SM85811339			Modern		Defence post	2.3	NAI	NAI	NAI
SM86091368			Post-Medieval	BROADHAVEN BRIDGE	Bridge	2.4	HTL	HTL	MR
SM861371384			Post-Medieval	BROAD HAVEN HOUSE	Dwelling	2.4	HTL	HTL	MR
SM86091368			Post-Medieval	BROADHAVEN BRIDGE	Bridge	2.4	HTL	HTL	MR
SM861371384			Post-Medieval	BROAD HAVEN HOUSE	Dwelling	2.4	HTL	HTL	MR
SM86151397			Post-Medieval	HAROLDSTON BRIDGE	Bridge	2.5	HTL	MR	NAI
SM86151397			Post-Medieval	HAROLDSTON BRIDGE	Bridge	2.5	HTL	MR	NAI
SM86101409			Post-Medieval	HAROLDSTON	Lime kiln	2.6	HTL	HTL	MR
SM86101409			Post-Medieval	HAROLDSTON	Lime kiln	2.6	HTL	HTL	MR
SM86101409			Post-Medieval	HAROLDSTON	Lime kiln	2.6	HTL	HTL	MR
SM85971527			Iron Age	BLACK POINT RATH	Hillfort	2.7	NAI	NAI	NAI
SM86171650			Palaeolithic	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM86171650			Prehistoric	DRUIDSTON CHINS	Flint scatter	2.7	NAI	NAI	NAI
SM86161668			Palaeolithic	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM86161668			Prehistoric	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM858183			Mesolithic	NOLTON HAVEN	Findspot	2.7	NAI	NAI	NAI
SM85971527			Iron Age	BLACK POINT RATH	Hillfort	2.7	NAI	NAI	NAI
SM86171650			Palaeolithic	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM86171650			Prehistoric	DRUIDSTON CHINS	Flint scatter	2.7	NAI	NAI	NAI
SM86161668			Palaeolithic	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM86161668			Prehistoric	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM85971527			Iron Age	BLACK POINT RATH	Hillfort	2.7	NAI	NAI	NAI
SM86171650			Palaeolithic	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM86171650			Prehistoric	DRUIDSTON CHINS	Flint scatter	2.7	NAI	NAI	NAI
SM86161668			Palaeolithic	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM86161668			Prehistoric	DRUIDSTON CHINS	Findspot	2.7	NAI	NAI	NAI
SM858183			Mesolithic	NOLTON HAVEN	Findspot	2.7	NAI	NAI	NAI
SM85981858			Modern		Tank trap	2.8	HTL	MR	MR
SM85981858			Modern		Tank trap	2.8	HTL	MR	MR
SM85981859			Post-Medieval		Lime kiln	2.8	HTL	MR	MR
SM742239			Medieval,Early-Medieval	PORTH CLAIS	Landing point	3.1	NAI	NAI	NAI
SM804722414			Post-Medieval	LIMEKILN ON S.SDIE OF ESTUARY, Y GRIBIN, SOLFACH ISAF/LOWER SOLVA	Limekiln	3.1	NAI	NAI	NAI
SM804842414			Post-Medieval	LIMEKILN ON S.SIDE OF ESTUARY, Y GRIBIN, SOLFACH ISAF/LOWER SOLVA	Limekiln	3.1	NAI	NAI	NAI
SM75022418			Mesolithic	ST NON'S BAY	Lithic working site	3.1	NAI	NAI	NAI
SM786242			Iron Age	PORTH Y RHAW CAMP	Hillfort	3.1	NAI	NAI	NAI
SM78602420			Prehistoric	PORTH-Y-RHAW	Findspot	3.1	NAI	NAI	NAI
SM770242			Post-Medieval,Medieval	TRELERW COMMON	Common land	3.1	NAI	NAI	NAI
SM78522429			Unknown	CAER BWDY BAY	Agricultural clearance	3.1	NAI	NAI	NAI
SM78002435			Post-Medieval,Medieval	CAERFAI	Quarry	3.1	NAI	NAI	NAI
SM76052437			Unknown	CAER FAI BAY	Unknown	3.1	NAI	NAI	NAI
SM76602440			Post-Medieval	CAER BWDY	Quarry	3.1	NAI	NAI	NAI
SM73312740			Unknown,Medieval,Early medieva	TY GWYN	Inscribed stone	3.1	NAI	NAI	NAI
SM733274			Prehistoric	PWLLLEUOG	Findspot	3.1	NAI	NAI	NAI
SM72282787			Unknown	OGOF Y GEIFR	Cave	3.1	NAI	NAI	NAI
SM79403149			Iron Age	TRWYN;TRWYN Y CASTELL	Hillfort	3.1	NAI	NAI	NAI
SM80073224			Post-Medieval	CULPORTH	Clearance cairn	3.1	NAI	NAI	NAI
SM86603373			Unknown	PWLLSTRODUR	Quarry	3.1	NAI	NAI	NAI
SM85213379			Post-Medieval	ABER CASTLE	Building	3.1	NAI	NAI	NAI
SM88453512			Post-Medieval	ABER BACH	Boat house	3.1	NAI	NAI	NAI
SM813473261			Post-Medieval	PILOT HOUSE,PORTHGAIN	Pilot house	3.10	HTL	HTL	HTL
SM81433262			Modern	PORTH GAIN	Spoil heap	3.10	HTL	HTL	HTL

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SM852093364			Post-Medieval	LIME-KILN BETWEEN COASTAL SLOPE & THE BEACH, THE HARBOUR (S SIDE) ,ABERCASTLE/ABERCASTELL	Lime-kiln	3.10	HTL	HTL	HTL
SM85173367			Post-Medieval	ABER CASTLE	Mooring bollard	3.10	HTL	HTL	HTL
SM85063375			Post-Medieval	ABER CASTLE	Mooring bollard	3.10	HTL	HTL	HTL
SM85023375			Post-Medieval	ABER CASTLE	Cottage	3.10	HTL	HTL	HTL
SM84123379			Unknown	PWLLWHITING	Quarry	3.10	HTL	HTL	HTL
SM75022418			Mesolithic	ST NON'S BAY	Lithic working site	3.1	NAI	NAI	NAI
SM733274			Prehistoric	PWLLLEUOG	Findspot	3.1	NAI	NAI	NAI
SM804722414			Post-Medieval	LIMEKILN ON S.SDIE OF ESTUARY, Y GRIBIN, SOLFACH ISAF/LOWER SOLVA	Limekiln	3.1	NAI	NAI	NAI
SM804842414			Post-Medieval	LIMEKILN ON S.SIDE OF ESTUARY,Y GRIBIN, SOLFACH ISAF/LOWER SOLVA	Limekiln	3.1	NAI	NAI	NAI
SM75022418			Mesolithic	ST NON'S BAY	Lithic working site	3.1	NAI	NAI	NAI
SM76522429			Unknown	CAER BWDY BAY	Agricultural clearance	3.1	NAI	NAI	NAI
SM76002435			Post-Medieval,Medieval	CAERFAI	Quarry	3.1	NAI	NAI	NAI
SM733274			Prehistoric	PWLLLEUOG	Findspot	3.1	NAI	NAI	NAI
SM72282787			Unknown	OGOF Y GEIFR	Cave	3.1	NAI	NAI	NAI
SM852093364			Post-Medieval	LIME-KILN BETWEEN COASTAL SLOPE & THE BEACH, THE HARBOUR (S SIDE) ,ABERCASTLE/ABERCASTELL	Lime-kiln	3.10	HTL	HTL	HTL
SM85173367			Post-Medieval	ABER CASTLE	Mooring bollard	3.10	HTL	HTL	HTL
SM742239			Medieval,Early-Medieval	PORTH CLAIS	Landing point	3.1	NAI	NAI	NAI
SM804722414			Post-Medieval	LIMEKILN ON S.SDIE OF ESTUARY, Y GRIBIN, SOLFACH ISAF/LOWER SOLVA	Limekiln	3.1	NAI	NAI	NAI
SM804842414			Post-Medieval	LIMEKILN ON S.SIDE OF ESTUARY,Y GRIBIN, SOLFACH ISAF/LOWER SOLVA	Limekiln	3.1	NAI	NAI	NAI
SM75022418			Mesolithic	ST NON'S BAY	Lithic working site	3.1	NAI	NAI	NAI
SM786242			Iron Age	PORTH Y RHAW CAMP	Hillfort	3.1	NAI	NAI	NAI
SM78602420			Prehistoric	PORTH-Y-RHAW	Findspot	3.1	NAI	NAI	NAI
SM770242			Post-Medieval,Medieval	TRELERW COMMON	Common land	3.1	NAI	NAI	NAI
SM76522429			Unknown	CAER BWDY BAY	Agricultural clearance	3.1	NAI	NAI	NAI
SM76002435			Post-Medieval,Medieval	CAERFAI	Quarry	3.1	NAI	NAI	NAI
SM76052437			Unknown	CAER FAI BAY	Unknown	3.1	NAI	NAI	NAI
SM76602440			Post-Medieval	CAER BWDY	Quarry	3.1	NAI	NAI	NAI
SM73312740			Unknown,Medieval,Early medieva	TY GWYN	Inscribed stone	3.1	NAI	NAI	NAI
SM733274			Prehistoric	PWLLLEUOG	Findspot	3.1	NAI	NAI	NAI
SM72282787			Unknown	OGOF Y GEIFR	Cave	3.1	NAI	NAI	NAI
SM79403149			Iron Age	TRWYN;TRWYN Y CASTELL	Hillfort	3.1	NAI	NAI	NAI
SM80073224			Post-Medieval	CULPORTH	Clearance cairn	3.1	NAI	NAI	NAI
SM813473261			Post-Medieval	PILOT HOUSE,PORTHGAIN	Pilot house	3.10	HTL	HTL	HTL
SM81433262			Modern	PORTH GAIN	Spoil heap	3.10	HTL	HTL	HTL
SM852093364			Post-Medieval	LIME-KILN BETWEEN COASTAL SLOPE & THE BEACH, THE HARBOUR (S SIDE) ,ABERCASTLE/ABERCASTELL	Lime-kiln	3.10	HTL	HTL	HTL
SM85173367			Post-Medieval	ABER CASTLE	Mooring bollard	3.10	HTL	HTL	HTL
SM86603373			Unknown	PWLLSTRODUR	Quarry	3.1	NAI	NAI	NAI
SM85063375			Post-Medieval	ABER CASTLE	Mooring bollard	3.10	HTL	HTL	HTL
SM85023375			Post-Medieval	ABER CASTLE	Cottage	3.10	HTL	HTL	HTL
SM85213379			Post-Medieval	ABER CASTLE	Building	3.1	NAI	NAI	NAI
SM84123379			Unknown	PWLLWHITING	Quarry	3.10	HTL	HTL	HTL
SM88453512			Post-Medieval	ABER BACH	Boat house	3.1	NAI	NAI	NAI
SM85223363			Post-Medieval	ABER CASTLE	Building	3.11	HTL	MR	MR
SM85223363			Post-Medieval	ABER CASTLE	Building	3.11	HTL	MR	MR
SM882345			Neolithic,Mesolithic	ABER MAWR	Flint working site	3.12	NAI	NAI	NAI
SM882345			Neolithic,Mesolithic	ABER MAWR	Flint working site	3.12	NAI	NAI	NAI
SM882345			Neolithic,Mesolithic	ABER MAWR	Flint working site	3.12	NAI	NAI	NAI
SM882345			Neolithic,Mesolithic	ABER MAWR	Flint working site	3.12	NAI	NAI	NAI
SM80152410			Post-Medieval	SOLVA	Lifeboat station	3.3	HTL	HTL	HTL
SM80182412			Post-Medieval	SOLVA	Spring	3.3	HTL	HTL	HTL
SM80312417			Post-Medieval	SAND SLIP;SAND QUAY	Slipway,Quay	3.3	HTL	HTL	HTL
SM80152410			Post-Medieval	SOLVA	Lifeboat station	3.3	HTL	HTL	HTL
SM80312417			Post-Medieval	SAND SLIP;SAND QUAY	Slipway,Quay	3.3	HTL	HTL	HTL
SM80152410			Post-Medieval	SOLVA	Lifeboat station	3.3	HTL	HTL	HTL
SM80212412			Post-Medieval	TRINITY QUAY	Quay	3.3	HTL	HTL	HTL
SM80212412			Post-Medieval	SOLVA	Quarry	3.3	HTL	HTL	HTL
SM80182412			Post-Medieval	SOLVA	Spring	3.3	HTL	HTL	HTL
SM80312417			Post-Medieval	SAND SLIP;SAND QUAY	Slipway,Quay	3.3	HTL	HTL	HTL
SM803242			Neolithic,Mesolithic	SOLFACH;SOLVA	Findspot	3.3	HTL	HTL	HTL
SM74252393			Post-Medieval	PORTH CLAIS	Harbour	3.4	HTL	NAI	NAI
SM74252393			Post-Medieval	PORTH CLAIS	Harbour	3.4	HTL	NAI	NAI
SM74252393			Post-Medieval	PORTH CLAIS	Harbour	3.4	HTL	NAI	NAI
SM741292417			Post-Medieval	ONE OF A PAIR OF LIMEKILNS ON EASTERN QUAY, PORTHCLAIS	Limekiln	3.5	HTL	HTL	HTL
SM741292417			Post-Medieval	ONE OF A PAIR OF LIMEKILNS ON EASTERN QUAY, PORTHCLAIS	Limekiln	3.5	HTL	HTL	HTL
SM741292417			Post-Medieval	ONE OF A PAIR OF LIMEKILNS ON EASTERN QUAY, PORTHCLAIS	Limekiln	3.5	HTL	HTL	HTL
SM73372723			Post-Medieval	PARC Y CAPEL	Findspot	3.8	HTL	MR	MR
SM73382721			Medieval	ST PATRICK'S CHAPEL	Chapel	3.8	HTL	MR	MR
SM73382721			Early medieval;Medieval	ST PATRICK'S CHAPEL	Chapel,Cemetery	3.8	HTL	MR	MR
SM73372723			Post-Medieval	PARC Y CAPEL	Findspot	3.8	HTL	MR	MR
SM79753126			Post-Medieval		Lime kiln	3.9	MR	MR	MR
SN00234005			Iron Age	DINAS ISLAND CASTELL (WEST)	Hillfort	4.11	NAI	NAI	NAI
SN00234005			Iron Age	DINAS ISLAND CASTELL (WEST)	Hillfort	4.11	NAI	NAI	NAI
SN01484005			Neolithic	CWM-YR-EGLWYS	Findspot	4.12	HTL	HTL	HTL
SN01514006			Post-Medieval	CWM-YR-EGLWYS	Slipway	4.12	HTL	HTL	HTL
SN01494007			Early Medieval;Medieval	DINAS OLD PARISH CHURCH;ST BRYNACH'S CWM-YR-EGLWYS	Cist grave cemetery,Churchyard	4.12	HTL	HTL	HTL
SN014964007			Medieval	DINAS OLD PARISH CHURCH;ST BRYNACH'S;CWM-YR-EGLWYS	Church	4.12	HTL	HTL	HTL
SN01514006			Post-Medieval	CWM-YR-EGLWYS	Slipway	4.12	HTL	HTL	HTL
SN01494007			Early Medieval;Medieval	DINAS OLD PARISH CHURCH;ST BRYNACH'S CWM-YR-EGLWYS	Cist grave cemetery,Churchyard	4.12	HTL	HTL	HTL
SN014964007			Medieval	DINAS OLD PARISH CHURCH;ST BRYNACH'S;CWM-YR-EGLWYS	Church	4.12	HTL	HTL	HTL
SN01484005			Neolithic	CWM-YR-EGLWYS	Findspot	4.12	HTL	HTL	HTL
SN01514006			Post-Medieval	CWM-YR-EGLWYS	Slipway	4.12	HTL	HTL	HTL
SN01494007			Early Medieval;Medieval	DINAS OLD PARISH CHURCH;ST BRYNACH'S CWM-YR-EGLWYS	Cist grave cemetery,Churchyard	4.12	HTL	HTL	HTL
SN014964007			Medieval	DINAS OLD PARISH CHURCH;ST BRYNACH'S;CWM-YR-EGLWYS	Church	4.12	HTL	HTL	HTL
SN02553950			Post-Medieval	ABERFFOREST BEACH	Harbour	4.13	NAI	NAI	NAI
SN02543952			Post-Medieval	ABERFFOREST	Lime kiln	4.13	NAI	NAI	NAI

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SN025383952			Post-Medieval	LIMEKILN ON ABERFFOREST BEACH, ABERFFOREST	Limekiln	4.13	NAI	NAI	NAI
SN02553950			Post-Medieval	ABERFFOREST BEACH	Harbour	4.13	NAI	NAI	NAI
SN02543952			Post-Medieval	ABERFFOREST	Lime kiln	4.13	NAI	NAI	NAI
SN025383952			Post-Medieval	LIMEKILN ON ABERFFOREST BEACH, ABERFFOREST	Limekiln	4.13	NAI	NAI	NAI
SN04893972			Post-Medieval	BRYN-Y-MOR	Slipway	4.14	MR	MR	MR
SN04633973			Post-Medieval	TRAETH Y BETTWS	Wharf, Harbour	4.14	MR	MR	MR
SN04893972			Post-Medieval	BRYN-Y-MOR	Slipway	4.14	MR	MR	MR
SN04633973			Post-Medieval	TRAETH Y BETTWS	Wharf, Harbour	4.14	MR	MR	MR
SN050023963			Post-Medieval	Ondara House	House	4.15	HTL	HTL	MR
SN05123964			Post-Medieval	PARROG	Lime kiln	4.15	HTL	HTL	MR
SN051203964			Post-Medieval	SMALL LIMEKILN ON NW SIDE OF CARROG CAR PARK, PARROG ROAD	Limekiln	4.15	HTL	HTL	MR
SN05043964			Post-Medieval	PAROG	Well	4.15	HTL	HTL	MR
SN05003964			Post-Medieval	PAROG	Wharf, Harbour	4.15	HTL	HTL	MR
SN051343964			Post-Medieval	MAIN LIMEKILN ON NW SIDE OF PARROG CAR PARK, PARROG ROAD	Limekiln	4.15	HTL	HTL	MR
SN05143965			Post-Medieval	PARROG	Life saving apparatus shed	4.15	HTL	HTL	MR
SN051323965			Post-Medieval	Kiln Cottage	Cottage	4.15	HTL	HTL	MR
SN051413965			Post-Medieval	Stores adjacent to Kiln Cottage and the lime kiln	Unknown	4.15	HTL	HTL	MR
SN04973967			Post-Medieval	PAROG	Findspot, Feature	4.15	HTL	HTL	MR
SN052397			Post-Medieval, Medieval	NEWPORT PAROG	Port	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Shipyards	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Quay	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Warehouse	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Coal yard	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Shipyards	4.15	HTL	HTL	MR
SN05183970			Post-Medieval	PARROG	Lime kiln	4.15	HTL	HTL	MR
SN05183971			Post-Medieval	PARROG BOAT CLUB	Warehouse	4.15	HTL	HTL	MR
SN05043964			Post-Medieval	PAROG	Well	4.15	HTL	HTL	MR
SN05003964			Post-Medieval	PAROG	Wharf, Harbour	4.15	HTL	HTL	MR
SN04973967			Post-Medieval	PAROG	Findspot, Feature	4.15	HTL	HTL	MR
SN05183971			Post-Medieval	PARROG BOAT CLUB	Warehouse	4.15	HTL	HTL	MR
SN050023963			Post-Medieval	Ondara House	House	4.15	HTL	HTL	MR
SN05123964			Post-Medieval	PARROG	Lime kiln	4.15	HTL	HTL	MR
SN051203964			Post-Medieval	SMALL LIMEKILN ON NW SIDE OF CARROG CAR PARK, PARROG ROAD	Limekiln	4.15	HTL	HTL	MR
SN05043964			Post-Medieval	PAROG	Well	4.15	HTL	HTL	MR
SN05003964			Post-Medieval	PAROG	Wharf, Harbour	4.15	HTL	HTL	MR
SN051343964			Post-Medieval	MAIN LIMEKILN ON NW SIDE OF PARROG CAR PARK, PARROG ROAD	Limekiln	4.15	HTL	HTL	MR
SN05143965			Post-Medieval	PARROG	Life saving apparatus shed	4.15	HTL	HTL	MR
SN051323965			Post-Medieval	Kiln Cottage	Cottage	4.15	HTL	HTL	MR
SN051413965			Post-Medieval	Stores adjacent to Kiln Cottage and the lime kiln	Unknown	4.15	HTL	HTL	MR
SN04973967			Post-Medieval	PAROG	Findspot, Feature	4.15	HTL	HTL	MR
SN052397			Post-Medieval, Medieval	NEWPORT PAROG	Port	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Shipyards	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Quay	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Warehouse	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Coal yard	4.15	HTL	HTL	MR
SN05203970			Post-Medieval	PARROG	Shipyards	4.15	HTL	HTL	MR
SN05183970			Post-Medieval	PARROG	Lime kiln	4.15	HTL	HTL	MR
SN05183971			Post-Medieval	PARROG BOAT CLUB	Warehouse	4.15	HTL	HTL	MR
SN05773988			Post-Medieval	THE STOREHOUSE	Storehouse, Dwelling	4.16	NAI	NAI	NAI
SN05773988			Post-Medieval	STOREHOUSE	Jetty	4.16	NAI	NAI	NAI
SN05773988			Post-Medieval	THE STOREHOUSE	Storehouse, Dwelling	4.16	NAI	NAI	NAI
SN05773988			Post-Medieval	STOREHOUSE	Jetty	4.16	NAI	NAI	NAI
SN05773988			Post-Medieval	THE STOREHOUSE	Storehouse, Dwelling	4.16	NAI	NAI	NAI
SN05773988			Post-Medieval	THE STOREHOUSE	Storehouse, Dwelling	4.16	NAI	NAI	NAI
SN05773988			Post-Medieval	STOREHOUSE	Jetty	4.16	NAI	NAI	NAI
SM94813795			Post-Medieval	GOODWICK	Defence post	4.2	HTL	HTL	HTL/
SM96203911			Post-Medieval		Railway	4.2	HTL	HTL	HTL/
SM95803929			Modern	NORTH BREAKWATER	Breakwater	4.2	HTL	HTL	HTL/
SM94813795			Post-Medieval	GOODWICK	Defence post	4.2	HTL	HTL	HTL/
SM96203911			Post-Medieval		Railway	4.2	HTL	HTL	HTL/
SM95803929			Modern	NORTH BREAKWATER	Breakwater	4.2	HTL	HTL	HTL/
SM94993764			Modern	GOODWICK BRIDGE	Defence post	4.3	HTL	MR	MR
SM94993764			Modern	GOODWICK BRIDGE	Defence post	4.3	HTL	MR	MR
SM95953740			Post-Medieval	TOWER HILL HILL HOUSE	Dwelling	4.4	NAI	NAI	NAI
SM95763759			Post-Medieval	PENYRABER	Coastguard lookout	4.4	NAI	NAI	NAI
SM95753763			Post-Medieval	PENYRABER	Quarry	4.4	NAI	NAI	NAI
SM95953740			Post-Medieval	TOWER HILL HILL HOUSE	Dwelling	4.4	NAI	NAI	NAI
SM95763759			Post-Medieval	PENYRABER	Coastguard lookout	4.4	NAI	NAI	NAI
SM95753763			Post-Medieval	PENYRABER	Quarry	4.4	NAI	NAI	NAI
SM95953740			Post-Medieval	TOWER HILL HILL HOUSE	Dwelling	4.4	NAI	NAI	NAI
SM95763759			Post-Medieval	PENYRABER	Coastguard lookout	4.4	NAI	NAI	NAI
SM95753763			Post-Medieval	PENYRABER	Quarry	4.4	NAI	NAI	NAI
SM96173717			Post-Medieval	TRAINING SHIP SKIRMISHER	Lime kiln	4.5	HTL	HTL	HTL
SM959723720			Post-Medieval	SLADE LIME KILNS	Kiln	4.5	HTL	HTL	HTL
SM96173717			Post-Medieval	TRAINING SHIP SKIRMISHER	Lime kiln	4.5	HTL	HTL	HTL
SM959723720			Post-Medieval	SLADE LIME KILNS	Kiln	4.5	HTL	HTL	HTL
SM962643710			Post-Medieval	Fishguard Bridge	Bridge	4.6	HTL	HTL	MR
SM962193714			Post-Medieval	TRAINING SHIP SKIRMISHER	Warehouse	4.6	HTL	HTL	MR
SM962643710			Post-Medieval	Fishguard Bridge	Bridge	4.6	HTL	HTL	MR

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SM962193714			Post-Medieval	TRAINING SHIP SKIRMISHER	Warehouse	4.6	HTL	HTL	MR
SM962873731			Post-Medieval	Listed building in Fishguard and Goodwick community	Cottage	4.7	HTL	HTL	HTL
SM962123736			Post-Medieval	Nos 33 & 35 Quay Street	House	4.7	HTL	HTL	HTL
SM962023736			Post-Medieval	Listed building in Fishguard and Goodwick community	House	4.7	HTL	HTL	HTL
SM96163740			Modern	THE QUAY	Fish warehouse	4.7	HTL	HTL	HTL
SM961373741			Post-Medieval	THE QUAY	Quay	4.7	HTL	HTL	HTL
SM961373741			Post-Medieval	THE QUAY	Quay	4.7	HTL	HTL	HTL
SM962873731			Post-Medieval	Listed building in Fishguard and Goodwick community	Cottage	4.7	HTL	HTL	HTL
SM962793732			Post-Medieval	No 21 Quay Street	House	4.7	HTL	HTL	HTL
SM962223735			Post-Medieval	Nos 33 & 35 Quay Street	House	4.7	HTL	HTL	HTL
SM962123736			Post-Medieval	Nos 33 & 35 Quay Street	House	4.7	HTL	HTL	HTL
SM962023736			Post-Medieval	Listed building in Fishguard and Goodwick community	House	4.7	HTL	HTL	HTL
SM96163740			Modern	THE QUAY	Fish warehouse	4.7	HTL	HTL	HTL
SM961373741			Post-Medieval	THE QUAY	Quay	4.7	HTL	HTL	HTL
SM98183819			Post-Medieval	PWLL Y BLEWYN	Slate quarry	4.9	NAI	NAI	NAI
SM983384			Modern	FISHGUARD BATTERY	Coastal battery	4.9	NAI	NAI	NAI
SM98183819			Post-Medieval	PWLL Y BLEWYN	Slate quarry	4.9	NAI	NAI	NAI
SM98183819			Post-Medieval	PWLL Y BLEWYN	Slate quarry	4.9	NAI	NAI	NAI
SM983384			Modern	FISHGUARD BATTERY	Coastal battery	4.9	NAI	NAI	NAI
SM98183819			Post-Medieval	PWLL Y BLEWYN	Slate quarry	4.9	NAI	NAI	NAI
SM983384			Modern	FISHGUARD BATTERY	Coastal battery	4.9	NAI	NAI	NAI
SN1045			Unknown	ST CARANTOC DEDICATION	Deleted	5.1	NAI	NAI	NAI
SN1045			Roman,Iron Age	WAUN CARADOG	Findspot	5.1	NAI	NAI	NAI
SN1045			Medieval	CAPEL CRANOCK;CAPEL CARANTOC	Chapel	5.1	NAI	NAI	NAI
SN12994928			Post-Medieval	FRON-HAUL	Coastguard lookout	5.1	NAI	NAI	NAI
SN1045			Unknown	ST CARANTOC DEDICATION	Deleted	5.1	NAI	NAI	NAI
SN1045			Roman,Iron Age	WAUN CARADOG	Findspot	5.1	NAI	NAI	NAI
SN1045			Medieval	CAPEL CRANOCK;CAPEL CARANTOC	Chapel	5.1	NAI	NAI	NAI
SN1045			Unknown	ST CARANTOC DEDICATION	Deleted	5.1	NAI	NAI	NAI
SN1045			Roman,Iron Age	WAUN CARADOG	Findspot	5.1	NAI	NAI	NAI
SN1045			Medieval	CAPEL CRANOCK;CAPEL CARANTOC	Chapel	5.1	NAI	NAI	NAI
SN12994928			Post-Medieval	FRON-HAUL	Coastguard lookout	5.1	NAI	NAI	NAI
SN17285130			Post-Medieval		Quarry	5.15	NAI	NAI	NAI
SN17285130			Post-Medieval		Quarry	5.15	NAI	NAI	NAI
SN15904797			Post-Medieval	WELSLEY HOTEL	Quay	5.3	MR	MR	MR
SN162489			Neolithic	TYWYN WARREN	Findspot	5.8	HTL	HTL	HTL
SN16264899			Medieval	GWBERT	Rubbish pit	5.8	HTL	HTL	HTL
SN162489			Neolithic	TYWYN WARREN	Findspot	5.8	HTL	HTL	HTL
SN162489			Neolithic	TYWYN WARREN	Findspot	5.8	HTL	HTL	HTL
SN16264899			Medieval	GWBERT	Rubbish pit	5.8	HTL	HTL	HTL
SN278515			Post-Medieval	TRESAITH	Lime kiln	6.4	HTL	MR	MR
SN278515			Post-Medieval	TRESAITH	Lime kiln	6.4	HTL	MR	MR
SN293524			Post-Medieval	NYTH Y FRAN	Lime kiln	6.5	NAI	NAI	NAI
SN293524			Post-Medieval	PENBRYN	Port	6.5	NAI	NAI	NAI
SN293524			Post-Medieval	NYTH Y FRAN	Lime kiln	6.5	NAI	NAI	NAI
SN293524			Post-Medieval	PENBRYN	Port	6.5	NAI	NAI	NAI
SN311542			Post-Medieval	PENDINAS LOCHTYN	Quarry	6.6	HTL	MR	MR
SN311542			Post-Medieval	LLANGRANOG BEACH	Mine	6.6	HTL	MR	MR
SN31075416			Post-Medieval	LLANGRANOG	Lime kiln	6.6	HTL	MR	MR
SN311542			Post-Medieval	PENDINAS LOCHTYN	Quarry	6.6	HTL	MR	MR
SN311542			Post-Medieval	LLANGRANOG BEACH	Mine	6.6	HTL	MR	MR
SN354576			Post-Medieval	CWMTYDWR;CWMTUDU	Harbour	6.7	NAI	NAI	NAI
SN37235928				TRAETH COYBAL	Natural feature	6.7	NAI	NAI	NAI
SN37676004			Post-Medieval	BIRDS ROCK	Quarry	6.7	NAI	NAI	NAI
SN37846010			Unknown	CRAIG YR ADAR	Platform	6.7	NAI	NAI	NAI
SN38056017			Bronze Age,Modern	BANC BACH Y RHOWYN	Weapons pit,Scoop grave	6.7	NAI	NAI	NAI
SN354576			Post-Medieval	CWMTYDWR;CWMTUDU	Harbour	6.7	NAI	NAI	NAI
SN37235928				TRAETH COYBAL	Natural feature	6.7	NAI	NAI	NAI
SN37676004			Post-Medieval	BIRDS ROCK	Quarry	6.7	NAI	NAI	NAI
SN37846010			Unknown	CRAIG YR ADAR	Platform	6.7	NAI	NAI	NAI
SN38056017			Bronze Age,Modern	BANC BACH Y RHOWYN	Weapons pit,Scoop grave	6.7	NAI	NAI	NAI
SN35595751			Post-Medieval	CWMTUDU	Lime kiln	6.8	HTL	HTL	NAI
SN355965751			Post-Medieval	Former Limekiln at Cwmtudu	Limekiln	6.8	HTL	HTL	NAI
SN35595751			Post-Medieval	CWMTUDU	Lime kiln	6.8	HTL	HTL	NAI
SN355965751			Post-Medieval	Former Limekiln at Cwmtudu	Limekiln	6.8	HTL	HTL	NAI
SN387986036			Post-Medieval	NO.22 (NEUADD ROCK), ROCK STREET (W SIDE)	House	7.1	MR	MR	NAI
SN387946037			Post-Medieval	NO.23 (SNOWDON VIEW), ROCK STREET (W SIDE)	House	7.1	MR	MR	NAI
SN39015988			Post-Medieval	NEWQUAY LIFEBOAT STATION	Lifeboat station	7.2	HTL	HTL	HTL
SN390155991			Post-Medieval	RETAINING WALL OF PATENT SLIP, GLANMOR TERRACE (E SIDE)	Wall	7.2	HTL	HTL	HTL
SN389945992			Post-Medieval	NEWQUAY HARBOUR;PATENT SLIPWAY BUILDING	Warehouse	7.2	HTL	HTL	HTL
SN38986000			Post-Medieval	NEWQUAY HOTEL	Office,Inn	7.2	HTL	HTL	HTL
SN389336008			Post-Medieval	THE GLYN	Sailmaking works	7.2	HTL	HTL	HTL
SN389066009			Post-Medieval	THE CAPTAIN'S TABLE	Sailmaking works	7.2	HTL	HTL	HTL
SN390836014			Post-Medieval	THE PIER INCLUDING PARALLEL SLIPWAY, THE PIER	Sea pier and quay	7.2	HTL	HTL	HTL
SN39156015			Post-Medieval	NEWQUAY PIER	Pier	7.2	HTL	HTL	HTL
SN38866017			Post-Medieval	PROSPECT PLACE PUMP	Pump	7.2	HTL	HTL	HTL
SN390155991			Post-Medieval	RETAINING WALL OF PATENT SLIP, GLANMOR TERRACE (E SIDE)	Wall	7.2	HTL	HTL	HTL
SN39156015			Post-Medieval	NEWQUAY PIER	Pier	7.2	HTL	HTL	HTL
SN38866017			Post-Medieval	PROSPECT PLACE PUMP	Pump	7.2	HTL	HTL	HTL
SN39015988			Post-Medieval	NEWQUAY LIFEBOAT STATION	Lifeboat station	7.2	HTL	HTL	HTL
SN390155991			Post-Medieval	RETAINING WALL OF PATENT SLIP, GLANMOR TERRACE (E SIDE)	Wall	7.2	HTL	HTL	HTL
SN389945992			Post-Medieval	NEWQUAY HARBOUR;PATENT SLIPWAY BUILDING	Warehouse	7.2	HTL	HTL	HTL
SN38986000			Post-Medieval	NEWQUAY HOTEL	Office,Inn	7.2	HTL	HTL	HTL
SN389336008			Post-Medieval	THE GLYN	Sailmaking works	7.2	HTL	HTL	HTL
SN389066009			Post-Medieval	THE CAPTAIN'S TABLE	Sailmaking works	7.2	HTL	HTL	HTL
SN390836014			Post-Medieval	THE PIER INCLUDING PARALLEL SLIPWAY, THE PIER	Sea pier and quay	7.2	HTL	HTL	HTL
SN39156015			Post-Medieval	NEWQUAY PIER	Pier	7.2	HTL	HTL	HTL
SN38866017			Post-Medieval	PROSPECT PLACE PUMP	Pump	7.2	HTL	HTL	HTL
SN3905943			Unknown	PEN-GOILAN	Mound	7.3	MR	MR	MR
SN40125947			Medieval	FFYNNON FEDDYG	Holy well	7.3	MR	MR	MR

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SN404305982			Post-Medieval	SUMMER HOUSE TO N.OF PLAS LLANINA,LLANINA	Summer house	7.3	MR	MR	MR
SN39905943			Unknown	PEN-GOILAN	Mound	7.3	MR	MR	MR
SN39905943			Unknown	PEN-GOILAN	Mound	7.3	MR	MR	MR
SN40125947			Medieval	FFYNNON FEDDYG	Holy well	7.3	MR	MR	MR
SN404305982			Post-Medieval	SUMMER HOUSE TO N.OF PLAS LLANINA,LLANINA	Summer house	7.3	MR	MR	MR
SN40895973			Post-Medieval	CEI BACH	Breakwater	7.5	HTL	HTL	MR
SN40895973			Post-Medieval	CEI BACH	Breakwater	7.5	HTL	HTL	MR
SN40895973			Post-Medieval	CEI BACH	Breakwater	7.5	HTL	HTL	MR
SN42406050			Post-Medieval		Quarry	7.6	NAI	NAI	NAI
SN42586071			Post-Medieval	GILFACH-Y-HALEN	Lime kiln	7.6	NAI	NAI	NAI
SN42406050			Post-Medieval		Quarry	7.6	NAI	NAI	NAI
SN42586071			Post-Medieval	GILFACH-Y-HALEN	Lime kiln	7.6	NAI	NAI	NAI
SN53417038			Prehistoric,Post-Medieval,Medi	BANC	Field boundary	8.10	NAI	NAI	NAI
SN454526290			Post-Medieval	ABERAERON	Weigh house	8.2	HTL	HTL	MR
SN45466291			Post-Medieval	YR ODYN	Lime kiln	8.2	HTL	HTL	MR
SN454716295			Post-Medieval	NW QUAY TO HARBOUR BASIN,BEACH PARADE	Quay	8.2	HTL	HTL	MR
SN45446300			Post-Medieval	ABERAERON OUTER HARBOUR	Harbour	8.2	HTL	HTL	MR
SN45466291			Post-Medieval	YR ODYN	Lime kiln	8.2	HTL	HTL	MR
SN454716295			Post-Medieval	NW QUAY TO HARBOUR BASIN,BEACH PARADE	Quay	8.2	HTL	HTL	MR
SN454526290			Post-Medieval	ABERAERON	Weigh house	8.2	HTL	HTL	MR
SN45466291			Post-Medieval	YR ODYN	Lime kiln	8.2	HTL	HTL	MR
SN454716295			Post-Medieval	NW QUAY TO HARBOUR BASIN,BEACH PARADE	Quay	8.2	HTL	HTL	MR
SN456596278			Post-Medieval	NO.4 BELLE VUE TERRACE	House	8.3	HTL	HTL	HTL
SN456516278			Post-Medieval	NO.5 BELLE VUE TERRACE	House	8.3	HTL	HTL	HTL
SN457126279			Post-Medieval	NO.2 HARBOUR LANE	House	8.3	HTL	HTL	HTL
SN456436279			Post-Medieval	NO.6 BELLE VUE TERRACE	House	8.3	HTL	HTL	HTL
SN457086279			Post-Medieval	NO.3 HARBOUR LANE	House	8.3	HTL	HTL	HTL
SN457056280			Post-Medieval	NO.4 HARBOUR LANE	House	8.3	HTL	HTL	HTL
SN456366280			Post-Medieval	NO.7 BELLE VUE TERRACE	House	8.3	HTL	HTL	HTL
SN456296281			Post-Medieval	Listed building in Aberaeron community	House	8.3	HTL	HTL	HTL
SN45816283			Post-Medieval	LOWER BRIDGE	Bridge	8.3	HTL	HTL	HTL
SN45686290			Post-Medieval	ABERAERON INNER HARBOUR	Building	8.3	HTL	HTL	HTL
SN45656292			Post med	11 QUAY PARADE	Well	8.3	HTL	HTL	HTL
SN456606292			Post-Medieval	NO.1 CADWGAN PLACE (MENIVAL)	House	8.3	HTL	HTL	HTL
SN456546293			Post-Medieval	NO.11 QUAY PARADE	House	8.3	HTL	HTL	HTL
SN456486293			Post-Medieval	NO.10 QUAY PARADE (HAULFAN)	House	8.3	HTL	HTL	HTL
SN456416294			Post-Medieval	NO.9 QUAY PARADE	House	8.3	HTL	HTL	HTL
SN456366294			Post-Medieval	NO.8 QUAY PARADE	House	8.3	HTL	HTL	HTL
SN456116295			Post-Medieval	NE QUAY QUAY PARADE	Quay	8.3	HTL	HTL	HTL
SN456316295			Post-Medieval	NO.7A QUAY PARADE	House	8.3	HTL	HTL	HTL
SN456286295			Post-Medieval	NO.7 QUAY PARADE (TRAFALGAR)	House	8.3	HTL	HTL	HTL
SN456236296			Post-Medieval	NO.6 QUAY PARADE (ARBA)	House	8.3	HTL	HTL	HTL
SN454666299			Post-Medieval	SW.PIER TO HARBOUR BASIN,BEACH PARADE	Sea pier	8.3	HTL	HTL	HTL
SN45656292			Post med	11 QUAY PARADE	Well	8.3	HTL	HTL	HTL
SN456116295			Post-Medieval	NE QUAY QUAY PARADE	Quay	8.3	HTL	HTL	HTL
SN454666299			Post-Medieval	SW.PIER TO HARBOUR BASIN,BEACH PARADE	Sea pier	8.3	HTL	HTL	HTL
SN456596278			Post-Medieval	NO.4 BELLE VUE TERRACE	House	8.3	HTL	HTL	HTL
SN456516278			Post-Medieval	NO.5 BELLE VUE TERRACE	House	8.3	HTL	HTL	HTL
SN457166279			Post-Medieval	NO.1 HARBOUR LANE	House	8.3	HTL	HTL	HTL
SN457126279			Post-Medieval	NO.2 HARBOUR LANE	House	8.3	HTL	HTL	HTL
SN456436279			Post-Medieval	NO.6 BELLE VUE TERRACE	House	8.3	HTL	HTL	HTL
SN457086279			Post-Medieval	NO.3 HARBOUR LANE	House	8.3	HTL	HTL	HTL
SN457056280			Post-Medieval	NO.4 HARBOUR LANE	House	8.3	HTL	HTL	HTL
SN456366280			Post-Medieval	NO.7 BELLE VUE TERRACE	House	8.3	HTL	HTL	HTL
SN456296281			Post-Medieval	Listed building in Aberaeron community	House	8.3	HTL	HTL	HTL
SN45816283			Post-Medieval	LOWER BRIDGE	Bridge	8.3	HTL	HTL	HTL
SN45686290			Post-Medieval	ABERAERON INNER HARBOUR	Building	8.3	HTL	HTL	HTL
SN45656292			Post med	11 QUAY PARADE	Well	8.3	HTL	HTL	HTL
SN456606292			Post-Medieval	NO.1 CADWGAN PLACE (MENIVAL)	House	8.3	HTL	HTL	HTL
SN456546293			Post-Medieval	NO.11 QUAY PARADE	House	8.3	HTL	HTL	HTL
SN456676293			Post-Medieval	NO.2 CADWGAN PLACE (COEDMORE)	House	8.3	HTL	HTL	HTL
SN456486293			Post-Medieval	NO.10 QUAY PARADE (HAULFAN)	House	8.3	HTL	HTL	HTL
SN456416294			Post-Medieval	NO.9 QUAY PARADE	House	8.3	HTL	HTL	HTL
SN456366294			Post-Medieval	NO.8 QUAY PARADE	House	8.3	HTL	HTL	HTL
SN456116295			Post-Medieval	NE QUAY QUAY PARADE	Quay	8.3	HTL	HTL	HTL
SN456316295			Post-Medieval	NO.7A QUAY PARADE	House	8.3	HTL	HTL	HTL
SN456286295			Post-Medieval	NO.7 QUAY PARADE (TRAFALGAR)	House	8.3	HTL	HTL	HTL
SN456236296			Post-Medieval	NO.6 QUAY PARADE (ARBA)	House	8.3	HTL	HTL	HTL
SN454666299			Post-Medieval	SW.PIER TO HARBOUR BASIN,BEACH PARADE	Sea pier	8.3	HTL	HTL	HTL
SN45976336			Unknown	TREWEYDD-FAWR	Unknown	8.4	HTL	HTL	HTL
SN45976336			Unknown	TREWEYDD-FAWR	Unknown	8.4	HTL	HTL	HTL
SN478376397			Post-Medieval	Ciifton	House	8.6	HTL	MR	MR
SN478416397			Post-Medieval	Manteg	House	8.6	HTL	MR	MR
SN478376397			Post-Medieval	Ciifton	House	8.6	HTL	MR	MR
SN478416397			Post-Medieval	Manteg	House	8.6	HTL	MR	MR
SN49236497			Post-Medieval	CLOCHTYDDIAU-PRIDD	Trackway	8.7	NAI	NAI	NAI
SN50006581			Post-Medieval	MORFA-MAWR	Unknown	8.7	NAI	NAI	NAI
SN50536654			Post-Medieval	LLANON	Lime kiln	8.7	NAI	NAI	NAI
SN49236497			Post-Medieval	CLOCHTYDDIAU-PRIDD	Trackway	8.7	NAI	NAI	NAI
SN49236497			Post-Medieval	CLOCHTYDDIAU-PRIDD	Trackway	8.7	NAI	NAI	NAI
SN50006581			Post-Medieval	MORFA-MAWR	Unknown	8.7	NAI	NAI	NAI
SN50536654			Post-Medieval	LLANON	Lime kiln	8.7	NAI	NAI	NAI
SN514682			Neolithic	ALLT-LWYD	Findspot	8.8	MR	MR	MR
SN518566834			Post-Medieval	No 1 Craiglas Lime Kiln	Lime kiln	8.8	MR	MR	MR
SN518736834			Post-Medieval	No 2 Craiglas Lime Kiln	Lime kiln	8.8	MR	MR	MR
SN518866835			Post-Medieval	No 3 Craiglas Lime Kiln	Lime kiln	8.8	MR	MR	MR
SN518936835			Post-Medieval	No 4 Craiglas Lime Kiln	Lime kiln	8.8	MR	MR	MR
SN518966836			Post-Medieval	CRAIGLAS LIMEKILNS,GRAIGLAS	Lime kiln	8.8	MR	MR	MR
SN514682			Neolithic	ALLT-LWYD	Findspot	8.8	MR	MR	MR
SN518636832			Post-Medieval	Walled Enclosure at Craiglas Lime Kilns	Walled enclosure at lime kiln	8.8	MR	MR	MR
SN518566834			Post-Medieval	No 1 Craiglas Lime Kiln	Lime kiln	8.8	MR	MR	MR

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SN518736834			Post-Medieval	No 2 Craiglas Lime Kiln	Lime kiln	8.8	MR	MR	MR
SN518866835			Post-Medieval	No 3 Craiglas Lime Kiln	Lime kiln	8.8	MR	MR	MR
SN518936835			Post-Medieval	No 4 Craiglas Lime Kiln	Lime kiln	8.8	MR	MR	MR
SN51886836			Post-Medieval	CRAIGLAS LIMEKILNS;GRAIGLAS	Lime kiln	8.8	MR	MR	MR
SN52016846				CRAIGLAS	Natural feature	8.9	MR	MR	MR
SN52016846				CRAIGLAS	Natural feature	8.9	MR	MR	MR
SN52016846				CRAIGLAS	Natural feature	8.9	MR	MR	MR
SN52176857			Unknown	PEN-LAU-ODYN	Unknown	8.9	MR	MR	MR
SN56727778			Post-Medieval	MORFA BYCHAN	Lime kiln	9.1	NAI	NAI	NAI
SN56727778			Post-Medieval	MORFA BYCHAN	Lime kiln	9.1	NAI	NAI	NAI
SN577657959			Post-Medieval,Medieval	TAN-Y-BWLCH	Platform	9.2	MR	MR	NAI
SN580805			Post-Medieval	TANYBWLCH BEACH	Tramway	9.2	MR	MR	NAI
SN577657959			Post-Medieval,Medieval	TAN-Y-BWLCH	Platform	9.2	MR	MR	NAI
SN580805			Post-Medieval	TANYBWLCH BEACH	Tramway	9.2	MR	MR	NAI
SN57928088			Post-Medieval		Breakwater	9.3	HTL	HTL	HTL
SN58028111			Post-Medieval	RHO-WEN	Building	9.3	HTL	HTL	HTL
SN57928088			Post-Medieval		Breakwater	9.3	HTL	HTL	HTL
SN57928088			Post-Medieval		Breakwater	9.3	HTL	HTL	HTL
SN58028111			Post-Medieval	RHO-WEN	Building	9.3	HTL	HTL	HTL
SN58038127			Post-Medieval	SOUTH MARINE TERRACE	Terrace	9.7	HTL	HTL	HTL
SN578808160			Post-Medieval	NEW PROMENADE;WAR MEMORIAL	Commemorative monument	9.7	HTL	HTL	HTL
SN58038127			Post-Medieval	SOUTH MARINE TERRACE	Terrace	9.7	HTL	HTL	HTL
SN578808160			Post-Medieval	NEW PROMENADE;WAR MEMORIAL	Commemorative monument	9.7	HTL	HTL	HTL
SN580558171			Post-Medieval	NEW PROMENADE STATUE OF EDWARD PRINCE OF WALES	Statue	9.8	HTL	HTL	HTL
SN580728173			Post-Medieval	NEW PROMENADE STATUE OF THOMAS EDWARDS	Statue	9.8	HTL	HTL	HTL
SN580998173			Post-Medieval	UNIVERSITY OF ABERYSTWYTH OVERSEAS UNIT AND STUDENT HEALTH CENTRE	College building	9.8	HTL	HTL	HTL
SN581098174			Post-Medieval	UNIVERSITY OF ABERYSTWYTH,STUDENT HEALTH CENTRE,NEW PROMENADE	Health centre	9.8	HTL	HTL	HTL
SN581238175			Post-Medieval	UNITED THEOLOGICAL COLLEGE;CAMBRIAN HOTEL	Hotel,College	9.8	HTL	HTL	HTL
SN58148177			Post-Medieval	ABERYSTWYTH CUSTOM HOUSE	Custom house	9.8	HTL	HTL	HTL
SN580728173			Post-Medieval	NEW PROMENADE STATUE OF THOMAS EDWARDS	Statue	9.8	HTL	HTL	HTL
SN580558171			Post-Medieval	NEW PROMENADE STATUE OF EDWARD PRINCE OF WALES	Statue	9.8	HTL	HTL	HTL
SN580728173			Post-Medieval	NEW PROMENADE STATUE OF THOMAS EDWARDS	Statue	9.8	HTL	HTL	HTL
SN580998173			Post-Medieval	UNIVERSITY OF ABERYSTWYTH OVERSEAS UNIT AND STUDENT HEALTH CENTRE	College building	9.8	HTL	HTL	HTL
SN58148174			Post-Medieval	KING STREET	Dwelling	9.8	HTL	HTL	HTL
SN581098174			Post-Medieval	UNIVERSITY OF ABERYSTWYTH,STUDENT HEALTH CENTRE,NEW PROMENADE	Health centre	9.8	HTL	HTL	HTL
SN581238175			Post-Medieval	UNITED THEOLOGICAL COLLEGE;CAMBRIAN HOTEL	Hotel,College	9.8	HTL	HTL	HTL
SN58148177			Post-Medieval	ABERYSTWYTH CUSTOM HOUSE	Custom house	9.8	HTL	HTL	HTL
SN581788176			Post-Medieval	MARINE TERRACE NO.4	Terrace	9.9	HTL	HTL	HTL/A
SN581598176			Post-Medieval	MARINE TERRACE NOS.2 3 ROCK HOUSE	Terrace	9.9	HTL	HTL	HTL/A
SN581658176			Post-Medieval	NO.3 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN582258180			Post-Medieval	MARINE TERRACE NOS.7 8 9 10 11 12;JOHN WILLIAMS HALL	Terrace	9.9	HTL	HTL	HTL/A
SN582818			Post-Medieval	MARINE TERRACE	Terrace	9.9	HTL	HTL	HTL/A
SN582598183			Post-Medieval	MARINE TERRACE NOS.15 16 17	Terrace	9.9	HTL	HTL	HTL/A
SN582648184			Post-Medieval	NO.16 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN582688184			Post-Medieval	NO.17 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583178190			Post-Medieval	MARINE TERRACE NO.24 BELGRAVE HOUSE NO.66 GROSVENOR HOUSE	Terrace	9.9	HTL	HTL	HTL/A
SN583228190			Post-Medieval	NO.66 MARINE TERRACE (GROSVENOR HOUSE)	Flats	9.9	HTL	HTL	HTL/A
SN583708203			Post-Medieval	MARINE TERRACE NOS.38 39 40 41 42;CARPENTER HALL	Terrace	9.9	HTL	HTL	HTL/A
SN583688205			Post-Medieval	MARINE TERRACE NOS.43 44 45 INCL.RICHMOND HOTEL	Terrace,Hotel	9.9	HTL	HTL	HTL/A
SN583688206			Post-Medieval	NOS.44 & 45 MARINE TERRACE,INCLUDING RICHMOND HOTEL	House & hotel	9.9	HTL	HTL	HTL/A
SN583658208			Post-Medieval	MARINE TERRACE NO.46	Building	9.9	HTL	HTL	HTL/A
SN583648209			Post-Medieval	MARINE TERRACE NOS.47 48 49 50 51 52 INCL.MARINE HOTEL	Terrace,Hotel	9.9	HTL	HTL	HTL/A
SN583638210			Post-Medieval	NO.48 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583638212			Post-Medieval	NOS.49-52 (CONSEC) MARINE TERRACE (MARINE HOTEL)	Hotel	9.9	HTL	HTL	HTL/A
SN583558217			Post-Medieval	MARINE TERRACE NOS.57 58 59 60 61 62	Terrace	9.9	HTL	HTL	HTL/A
SN583558217			Post-Medieval	NO.58 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583558218			Post-Medieval	NO.59 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583558218			Post-Medieval	NO.60 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583568219			Post-Medieval	NO.61 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583568219			Post-Medieval	NO.62 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN58358223			Post-Medieval	PENBRYN-DIODEF;BRYN DIODDAU;SUFFERING MOUNT	Execution site	9.9	HTL	HTL	HTL/A
SN583598224			Post-Medieval	COUNTY HALL & POLICE STATION ALBERT PLACE	Police station,Municipal building	9.9	HTL	HTL	HTL/A
SN583598226			Post-Medieval	POLICE STATION,ALBERT PLACE	Police station	9.9	HTL	HTL	HTL/A
SN583548230			Post-Medieval	VICTORIA HOUSE	Building	9.9	HTL	HTL	HTL/A
SN583558232			Post-Medieval	GLENGOWER HOTEL THE	Hotel	9.9	HTL	HTL	HTL/A
SN583558235			Post-Medieval	PLYNYMON HALL AND CAERLEON	Building	9.9	HTL	HTL	HTL/A
SN583578238			Post-Medieval	SEA BANK HOTEL;CLARENDON HOTEL;QUEENSBRIDGE HOTEL;BLAENWERN;ABERGELDIE;BALMORAL	Terrace	9.9	HTL	HTL	HTL/A
SN583588239			Post-Medieval	CLARENDON HOTEL	Hotel	9.9	HTL	HTL	HTL/A
SN583588240			Post-Medieval	QUEENSBRIDGE HOTEL	Hotel	9.9	HTL	HTL	HTL/A
SN583588241			Post-Medieval	BLAENWERN	House	9.9	HTL	HTL	HTL/A
SN583578242			Post-Medieval	ABERGELDIE	House	9.9	HTL	HTL	HTL/A
SN583558243			Post-Medieval	BALMORAL	Hall of residence	9.9	HTL	HTL	HTL/A
SN581968176			Post-Medieval	COURTYARD TO REAR OF NO.5A MARINE TERRACE	Courtyard	9.9	HTL	HTL	HTL/A
SN581788176			Post-Medieval	MARINE TERRACE NO.4	Terrace	9.9	HTL	HTL	HTL/A
SN581598176			Post-Medieval	MARINE TERRACE NOS.2 3 ROCK HOUSE	Terrace	9.9	HTL	HTL	HTL/A
SN582018176			Post-Medieval	COURTYARD TO REAR OF NO.6B MARINE TERRACE	Courtyard	9.9	HTL	HTL	HTL/A
SN581658176			Post-Medieval	NO.3 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN582258180			Post-Medieval	MARINE TERRACE NOS.7 8 9 10 11 12;JOHN WILLIAMS HALL	Terrace	9.9	HTL	HTL	HTL/A

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SN582818			Post-Medieval	MARINE TERRACE	Terrace	9.9	HTL	HTL	HTL/A
SN582598183			Post-Medieval	MARINE TERRACE NOS.15 16 17	Terrace	9.9	HTL	HTL	HTL/A
SN582648184			Post-Medieval	NO.16 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN582888184			Post-Medieval	MARINE TERRACE NOS.18 19 20	Terrace	9.9	HTL	HTL	HTL/A
SN582688184			Post-Medieval	NO.17 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN582918185			Post-Medieval	NO.19 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN582978185			Post-Medieval	NO.20 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583078187			Post-Medieval	BELLE VUE ROYAL HOTEL	Hotel	9.9	HTL	HTL	HTL/A
SN583178190			Post-Medieval	MARINE TERRACE NO.24 BELGRAVE HOUSE NO.66 GROSVENOR HOUSE	Terrace	9.9	HTL	HTL	HTL/A
SN583228190			Post-Medieval	NO.66 MARINE TERRACE (GROSVENOR HOUSE)	Flats	9.9	HTL	HTL	HTL/A
SN583498195			Post-Medieval	MARINE TERRACE NO.32	Dwelling	9.9	HTL	HTL	HTL/A
SN583708203			Post-Medieval	MARINE TERRACE NOS.38 39 40 41 42;CARPENTER HALL	Terrace	9.9	HTL	HTL	HTL/A
SN583688205			Post-Medieval	MARINE TERRACE NOS.43 44 45 INCL.RICHMOND HOTEL	Terrace,Hotel	9.9	HTL	HTL	HTL/A
SN583688206			Post-Medieval	NOS.44 & 45 MARINE TERRACE,INCLUDING RICHMOND HOTEL	House & hotel	9.9	HTL	HTL	HTL/A
SN583658208			Post-Medieval	MARINE TERRACE NO.46	Building	9.9	HTL	HTL	HTL/A
SN583648209			Post-Medieval	MARINE TERRACE NOS.47 48 49 50 51 52 INCL.MARINE HOTEL	Terrace,Hotel	9.9	HTL	HTL	HTL/A
SN583638210			Post-Medieval	NO.48 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583638212			Post-Medieval	NOS.49-52 (CONSEC) MARINE TERRACE (MARINE HOTEL)	Hotel	9.9	HTL	HTL	HTL/A
SN583558217			Post-Medieval	MARINE TERRACE NOS.57 58 59 60 61 62	Terrace	9.9	HTL	HTL	HTL/A
SN583558217			Post-Medieval	NO.58 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583558218			Post-Medieval	NO.59 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583558218			Post-Medieval	NO.60 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583568219			Post-Medieval	NO.61 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN583568219			Post-Medieval	NO.62 MARINE TERRACE	House	9.9	HTL	HTL	HTL/A
SN58358223			Post-Medieval	PENBRYN-DIODDEF;BRYN DIODDAU;SUFFERING MOUNT	Execution site	9.9	HTL	HTL	HTL/A
SN583598224			Post-Medieval	COUNTY HALL & POLICE STATION ALBERT PLACE	Police station,Municipal building	9.9	HTL	HTL	HTL/A
SN583598226			Post-Medieval	POLICE STATION,ALBERT PLACE	Police station	9.9	HTL	HTL	HTL/A
SN583548230			Post-Medieval	VICTORIA HOUSE	Building	9.9	HTL	HTL	HTL/A
SN583558232			Post-Medieval	GLENGOWER HOTEL THE	Hotel	9.9	HTL	HTL	HTL/A
SN583558235			Post-Medieval	PLYNYLWYD HALL AND CAERLEON	Building	9.9	HTL	HTL	HTL/A
SN583578238			Post-Medieval	SEA BANK HOTEL;CLARENDON HOTEL;QUEENSBIDGE HOTEL;BLAENWERN;ABERGELDIE;BALMORA L	Terrace	9.9	HTL	HTL	HTL/A
SN583588239			Post-Medieval	CLARENDON HOTEL	Hotel	9.9	HTL	HTL	HTL/A
SN583588240			Post-Medieval	QUEENSBIDGE HOTEL	Hotel	9.9	HTL	HTL	HTL/A
SN583588241			Post-Medieval	BLAENWERN	House	9.9	HTL	HTL	HTL/A
SN583578242			Post-Medieval	ABERGELDIE	House	9.9	HTL	HTL	HTL/A
SN583558243			Post-Medieval	BALMORAL	Hall of residence	9.9	HTL	HTL	HTL/A
SN59378678			General	MOELCERNI	Natural feature	10.1	MR	MR	MR
SN59378678			General	MOELCERNI	Natural feature	10.1	MR	MR	MR
SN61419591A		FINDSPOT	Post-Medieval			10.13	HTL	HTL	HTL
SN61659600	LB GII	BUILDING	Post-Medieval			10.13	HTL	HTL	HTL
SN61659600	LB GII	BUILDING	Post-Medieval			10.13	HTL	HTL	HTL
SN61659600	LB GII	BUILDING	Post-Medieval			10.13	HTL	HTL	HTL
SN61659600	LB GII	BUILDING	Post-Medieval			10.13	HTL	HTL	HTL
SN61419591A		FINDSPOT	Post-Medieval			10.13	HTL	HTL	HTL
SN61659600	LB GII	BUILDING	Post-Medieval			10.13	HTL	HTL	HTL
SN61659600	LB GII	BUILDING	Post-Medieval			10.13	HTL	HTL	HTL
SN61659600	LB GII	BUILDING	Post-Medieval			10.13	HTL	HTL	HTL
SN61659600	LB GII	BUILDING	Post-Medieval			10.13	HTL	HTL	HTL
SN59009776		PILL BOX	Modern			10.15	MR	MR	MR
SN58869810		PILL BOX	Modern			10.15	MR	MR	MR
SN58719846		PILL BOX	Modern			10.15	MR	MR	MR
SN58659878		MILITARY TRAINING SITE	Modern			10.15	MR	MR	MR
SN58539886		PILL BOX	Modern			10.15	MR	MR	MR
SN58869810		PILL BOX	Modern			10.15	MR	MR	MR
SN58719846		PILL BOX	Modern			10.15	MR	MR	MR
SN58539886		PILL BOX	Modern			10.15	MR	MR	MR
SN58869810		PILL BOX	Modern			10.15	MR	MR	MR
SN58719846		PILL BOX	Modern			10.15	MR	MR	MR
SN58539886		PILL BOX	Modern			10.15	MR	MR	MR
SN59009776		PILL BOX	Modern			10.15	MR	MR	MR
SN58869810		PILL BOX	Modern			10.15	MR	MR	MR
SN58719846		PILL BOX	Modern			10.15	MR	MR	MR
SN58659878		MILITARY TRAINING SITE	Modern			10.15	MR	MR	MR
SN58539886		PILL BOX	Modern			10.15	MR	MR	MR
SN58359940		TIDAL DOOR	Post-Medieval			10.15	MR	MR	MR
SH57900020A		FINDSPOT	BRONZE AGE			10.16	HTL	HTL	HTL
SH57900020A		FINDSPOT	BRONZE AGE			10.16	HTL	HTL	HTL
SH57900020A		FINDSPOT	BRONZE AGE			10.16	HTL	HTL	HTL
SN608890			Post-Medieval	BORTH	village	10.2	HTL	HTL	MR
SN60838933			Post-Medieval	CAPEL SILOH	Chapel	10.2	HTL	HTL	MR
SN60848934			Post-Medieval	WESLEY COTTAGE	Dwelling	10.2	HTL	HTL	MR
SN60858950			Medieval	PORTUHERAD;BORTH	Settlement	10.2	HTL	HTL	MR
SN60858950			Post-Medieval		School	10.2	HTL	HTL	MR
SN608895			Post-Medieval	BORTH BEACH	Sea defences,Breakwater	10.2	HTL	HTL	MR
SN608498958			Post-Medieval	Saxatile	House	10.2	HTL	HTL	MR
SN60868975			Post-Medieval	CAPEL LIBANUS;GERLAN	Chapel	10.2	HTL	HTL	MR
SN608358985			Post-Medieval	Angorfa	House	10.2	HTL	HTL	MR
SN608348985			Post-Medieval	Morfan	House	10.2	HTL	HTL	MR
SN608328986			Post-Medieval	Sabrina Cottage	House	10.2	HTL	HTL	MR
SN60839013			Post-Medieval	PANTYFEDWEN;GRAND HOTEL	Hotel	10.2	HTL	HTL	MR
SN608902			Prehistoric	YNYSLAS	Finds	10.2	HTL	HTL	MR
SN608895			Post-Medieval	BORTH BEACH	Sea defences,Breakwater	10.2	HTL	HTL	MR
SN608895			Post-Medieval	BORTH BEACH	Sea defences,Breakwater	10.2	HTL	HTL	MR
SN608902			Prehistoric	YNYSLAS	Finds	10.2	HTL	HTL	MR
SN608890			Post-Medieval	BORTH	village	10.2	HTL	HTL	MR
SN60838933			Post-Medieval	CAPEL SILOH	Chapel	10.2	HTL	HTL	MR
SN60848934			Post-Medieval	WESLEY COTTAGE	Dwelling	10.2	HTL	HTL	MR
SN60858950			Medieval	PORTUHERAD;BORTH	Settlement	10.2	HTL	HTL	MR
SN60858950			Post-Medieval		School	10.2	HTL	HTL	MR
SN608895			Post-Medieval	BORTH BEACH	Sea defences,Breakwater	10.2	HTL	HTL	MR
SN608498958			Post-Medieval	Saxatile	House	10.2	HTL	HTL	MR
SN60868975			Post-Medieval	CAPEL LIBANUS;GERLAN	Chapel	10.2	HTL	HTL	MR
SN608358985			Post-Medieval	Angorfa	House	10.2	HTL	HTL	MR

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SN608348985			Post-Medieval	Morfan	House	10.2	HTL	HTL	MR
SN608328986			Post-Medieval	Sabrina Cottage	House	10.2	HTL	HTL	MR
SN60839013			Post-Medieval	PANTYFEDWEN;GRAND HOTEL	Hotel	10.2	HTL	HTL	MR
SN608902			Prehistoric	YNYSLAS	Finds	10.2	HTL	HTL	MR
SN60789078			Post-Medieval	BORTH BEACH	Breakwater	10.3	HTL	MR	MR
SN60789078			Post-Medieval	BORTH BEACH	Breakwater	10.3	HTL	MR	MR
SN60789078			Post-Medieval	BORTH BEACH	Breakwater	10.3	HTL	MR	MR
SN69509698			Post-Medieval	GLAN-DYFI STATION	Railway station	10.7	HTL	HTL	MR
SN69509698			Post-Medieval	GLAN-DYFI STATION	Railway station	10.7	HTL	HTL	MR
SH56220450		MILITARY CAMP	Modern			11.1	HTL	HTL	HTL
SH56220450		MILITARY CAMP	Modern			11.1	HTL	HTL	HTL
SH56220450		MILITARY CAMP	Modern			11.1	HTL	HTL	HTL
SH59911802		INSCRIBED STONE	Early-Medieval			11.16	HTL	HTL	HTL
SH59911802		INSCRIBED STONE	Early-Medieval			11.16	HTL	HTL	HTL
SH59931802		CHURCH	Medieval			11.16	HTL	HTL	HTL
SH58622040		LANDSCAPE	Multi-period			11.18	MR	MR	MR
SH58622040		LANDSCAPE	Multi-period			11.18	MR	MR	MR
SH61061360		OUTFALL SEWER	Post-Medieval			11.4	HTL	MR	NAI
SH61061360		OUTFALL SEWER	Post-Medieval			11.4	HTL	MR	NAI
SH61061360		OUTFALL SEWER	Post-Medieval			11.4	HTL	MR	NAI
SH61903830		BRIDGE	Modern			12.10	NAI	NAI	NAI
SH61903830		BRIDGE	Modern			12.10	NAI	NAI	NAI
SH61903830		BRIDGE	Modern			12.10	NAI	NAI	NAI
SH56853795	LB GII	WHARF	Post-Medieval			12.13	HTL	HTL	HTL
SH57083828	LB GII	HARBOUR	Post-Medieval			12.13	HTL	HTL	HTL
SH56953840	LB GII	BUILDING	Post-Medieval			12.13	HTL	HTL	HTL
SH56853795	LB GII	WHARF	Post-Medieval			12.13	HTL	HTL	HTL
SH57083828	LB GII	HARBOUR	Post-Medieval			12.13	HTL	HTL	HTL
SH56953840	LB GII	BUILDING	Post-Medieval			12.13	HTL	HTL	HTL
SH50033784		HOUSE	Post-Medieval			12.18	HTL	HTL	MR
SH50043785		HOUSE	Medieval			12.18	HTL	HTL	MR
SH50043785	LB GII*	BUILDING	Post-Medieval			12.18	HTL	HTL	MR
SH50573813		BUILDING	Modern			12.18	HTL	HTL	MR
SH50033784		HOUSE	Post-Medieval			12.18	HTL	HTL	MR
SH50043785		HOUSE	Medieval			12.18	HTL	HTL	MR
SH50043785	LB GII*	BUILDING	Post-Medieval			12.18	HTL	HTL	MR
SH50573813		BUILDING	Modern			12.18	HTL	HTL	MR
SH49903770C		TOWN	Medieval			12.19	NAI	NAI	NAI
SH49903770C		TOWN	Medieval			12.19	NAI	NAI	NAI
SH49903770C		TOWN	Medieval			12.19	NAI	NAI	NAI
SH48903760		TOWNSHIP	Medieval			12.21	NAI	NAI	NAI
SH48903760		TOWNSHIP	Medieval			12.21	NAI	NAI	NAI
SH57812793		WHARF	Modern			12.4	HTL	HTL	HTL
SH57812793		WHARF	Modern			12.4	HTL	HTL	HTL
SH56872824		CROSS INCISED STONE	Unknown			12.5	MR	MR	MR
SH56872824		INSCRIBED STONE	Early-Medieval			12.5	MR	MR	MR
SH56872824		CHURCH	Medieval			12.5	MR	MR	MR
SH56872824		INSCRIBED STONE	Early-Medieval			12.5	MR	MR	MR
SH56872824		CHURCH	Modern			12.5	MR	MR	MR
SH56872824		CROSS INCISED STONE	Unknown			12.5	MR	MR	MR
SH56872824		INSCRIBED STONE	Early-Medieval			12.5	MR	MR	MR
SH56872824		CHURCH	Medieval			12.5	MR	MR	MR
SH56872824		INSCRIBED STONE	Early-Medieval			12.5	MR	MR	MR
SH56872824		CHURCH	Modern			12.5	MR	MR	MR
SH57002900A		FINDSPOT	BRONZE AGE			12.6	HTL	HTL	HTL
SH57002900A		FINDSPOT	BRONZE AGE			12.6	HTL	HTL	HTL
SH57002900A		FINDSPOT	BRONZE AGE			12.6	HTL	HTL	HTL
SH30282459		FINDSPOT	Prehistoric			13.18	NAI	NAI	NAI
SH30392468	SAM Cn 103	HILLFORT	Prehistoric			13.18	NAI	NAI	NAI
SH30502477A		FINDSPOT	Prehistoric			13.18	NAI	NAI	NAI
SH30972485		FIELD SYSTEM	Unknown			13.18	NAI	NAI	NAI
SH30972485		FIELD SYSTEM	Unknown			13.18	NAI	NAI	NAI
SH30282459		FINDSPOT	Prehistoric			13.18	NAI	NAI	NAI
SH30392468	SAM Cn 103	HILLFORT	Prehistoric			13.18	NAI	NAI	NAI
SH30502477A		FINDSPOT	Prehistoric			13.18	NAI	NAI	NAI
SH30972485		FIELD SYSTEM	Unknown			13.18	NAI	NAI	NAI
SH38803440A		FINDSPOT	Prehistoric			13.4	HTL	HTL	HTL
SH34623322		FIELD BOUNDARY	Post-Medieval			13.8	HTL	MR	MR
SH34623322		FIELD BOUNDARY	Post-Medieval			13.8	HTL	MR	MR
SH34623322		FIELD BOUNDARY	Post-Medieval			13.8	HTL	MR	MR
SH33503200		FIELD BOUNDARY	Post-Medieval			13.9	NAI	NAI	NAI
SH33503200		FIELD BOUNDARY	Post-Medieval			13.9	NAI	NAI	NAI
SH29002380A		FINDSPOT	MESOLITHIC			14.1	NAI	NAI	NAI
SH29002380A		FINDSPOT	MESOLITHIC			14.1	NAI	NAI	NAI
SH18822525		LONG HUT	Medieval			14.6	NAI	NAI	NAI
SH18822525		LONG HUT	Medieval			14.6	NAI	NAI	NAI
SH17292636		FINDSPOT	Medieval			14.8	HTL	MR	HTL
SH17322637		CHURCH	Medieval			14.8	HTL	MR	HTL
SH17322637		MONASTERY	Early-Medieval			14.8	HTL	MR	HTL
SH17322637		CHURCH	Medieval;Post-Medieval			14.8	HTL	MR	HTL
SH17232640	LB GII	BUILDING	Post-Medieval			14.8	HTL	MR	HTL
SH17302640C		CEMETERY	Medieval			14.8	HTL	MR	HTL
SH17322640	LB GII	BUILDING	Post-Medieval			14.8	HTL	MR	HTL
SH17292636		FINDSPOT	Medieval			14.8	HTL	MR	HTL
SH17292636		FINDSPOT	Medieval			14.8	HTL	MR	HTL
SH17322637		CHURCH	Medieval			14.8	HTL	MR	HTL
SH17322637		MONASTERY	Early-Medieval			14.8	HTL	MR	HTL
SH17322637		CHURCH	Medieval;Post-Medieval			14.8	HTL	MR	HTL
SH17232640	LB GII	BUILDING	Post-Medieval			14.8	HTL	MR	HTL
SH17302640C		CEMETERY	Medieval			14.8	HTL	MR	HTL
SH17322640	LB GII	BUILDING	Post-Medieval			14.8	HTL	MR	HTL
SH16602600		FISH WEIR	Medieval			14.9	NAI	NAI	NAI
SH16602600		FISH WEIR	Medieval			14.9	NAI	NAI	NAI
SH16602600		FISH WEIR	Medieval			14.9	NAI	NAI	NAI
SH16602600		FISH WEIR	Medieval			14.9	NAI	NAI	NAI
SH15422446		HUT CIRCLE	Prehistoric			15.1	NAI	NAI	NAI
SH14612696		PLATFORM	Unknown			15.1	NAI	NAI	NAI
SH14602700		BOUNDARY BANK	Modern			15.1	NAI	NAI	NAI
SH21993743	LB GII	LIME WORKS	Post-Medieval			15.1	NAI	NAI	NAI
SH26824092		FINDSPOT	?MESOLITHIC			15.1	NAI	NAI	NAI
SH32974282		HOUSE	Medieval			15.1	NAI	NAI	NAI
SH15422446		HUT CIRCLE	Prehistoric			15.1	NAI	NAI	NAI
SH14612696		PLATFORM	Unknown			15.1	NAI	NAI	NAI
SH15422446		HUT CIRCLE	Prehistoric			15.1	NAI	NAI	NAI

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SH14612696		PLATFORM	Unknown			15.1	NAI	NAI	NAI
SH14602700		BOUNDARY BANK	Modern			15.1	NAI	NAI	NAI
SH21993743	LB GII	LIME WORKS	Post-Medieval			15.1	NAI	NAI	NAI
SH15422446		HUT CIRCLE	Prehistoric			15.1	NAI	NAI	NAI
SH14612696		PLATFORM	Unknown			15.1	NAI	NAI	NAI
SH14602700		BOUNDARY BANK	Modern			15.1	NAI	NAI	NAI
SH21993743	LB GII	LIME WORKS	Post-Medieval			15.1	NAI	NAI	NAI
SH26824092		FINDSPOT	?MESOLITHIC			15.1	NAI	NAI	NAI
SH33044276		HOUSE PLATFORM	Medieval			15.1	NAI	NAI	NAI
SH32974282		HOUSE	Medieval			15.1	NAI	NAI	NAI
SH33134288		BUILDING	Medieval			15.1	NAI	NAI	NAI
SH33144290		HUT CIRCLE	Prehistoric			15.1	NAI	NAI	NAI
SH33154291		HOUSE PLATFORM	Medieval			15.1	NAI	NAI	NAI
SH33204299		HOUSE	Medieval			15.1	NAI	NAI	NAI
SH33204300A		FIELD SYSTEM	Roman			15.1	NAI	NAI	NAI
SH33204303		HUT CIRCLE	Roman			15.1	NAI	NAI	NAI
SH28304080A		NON-MONUMENT TYPE	Prehistoric			15.2	HTL	MR	MR
SH27644113		FINDSPOT	Unknown			15.2	HTL	MR	MR
SH28304080A		NON-MONUMENT TYPE	Prehistoric			15.2	HTL	MR	MR
SH28304080A		NON-MONUMENT TYPE	Prehistoric			15.2	HTL	MR	MR
SH27644113		FINDSPOT	Unknown			15.2	HTL	MR	MR
SH41565045		LIME KILN	Post-Medieval			15.4	NAI	NAI	NAI
SH40014901		LIME KILN	Post-Medieval			15.4	NAI	NAI	NAI
SH41565045		LIME KILN	Post-Medieval			15.4	NAI	NAI	NAI
SH45315878A		LANDSCAPE	Multi-period			16.11	HTL	HTL	MR
SH46136186		BUILDING	Post-Medieval			16.11	HTL	HTL	MR
SH45315878A		LANDSCAPE	Multi-period			16.11	HTL	HTL	MR
SH45315878A		LANDSCAPE	Multi-period			16.11	HTL	HTL	MR
SH45386026		FINDSPOT	Post-Medieval			16.11	HTL	HTL	MR
SH46136186		BUILDING	Post-Medieval			16.11	HTL	HTL	MR
SH47716269	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47696270	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47736281		COMPONENT	Medieval			16.12	HTL	HTL	HTL
SH47746283	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47746284	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47746287	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47756295		CHURCH	Medieval			16.12	HTL	HTL	HTL
SH47756295	LB GI	CHURCH	Medieval;Post-Medieval			16.12	HTL	HTL	HTL
SH47696270	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47716269	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47696270	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47736281		COMPONENT	Medieval			16.12	HTL	HTL	HTL
SH47746283	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47746284	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47746287	LB GII	BUILDING	Post-Medieval			16.12	HTL	HTL	HTL
SH47756295		CHURCH	Medieval			16.12	HTL	HTL	HTL
SH47756295	LB GI	CHURCH	Medieval;Post-Medieval			16.12	HTL	HTL	HTL
SH52496781		QUAY	Post-Medieval			16.14	HTL	HTL	HTL
SH52566784		LAMP POST	Post-Medieval			16.14	HTL	HTL	HTL
SH52566784		LOCK GATE MECHANISM	Post-Medieval			16.14	HTL	HTL	HTL
SH52566785		LOCK GATE	Post-Medieval			16.14	HTL	HTL	HTL
SH52496781		QUAY	Post-Medieval			16.14	HTL	HTL	HTL
SH52566784		LAMP POST	Post-Medieval			16.14	HTL	HTL	HTL
SH52566785		LOCK GATE	Post-Medieval			16.14	HTL	HTL	HTL
SH52496781		QUAY	Post-Medieval			16.14	HTL	HTL	HTL
SH52566784		LAMP POST	Post-Medieval			16.14	HTL	HTL	HTL
SH52566784		LOCK GATE MECHANISM	Post-Medieval			16.14	HTL	HTL	HTL
SH52566785		LOCK GATE	Post-Medieval			16.14	HTL	HTL	HTL
SH5256947	LB GII	DOCK	Post-Medieval			16.15	NAI	NAI	NAI
SH5256947	LB GII	DOCK	Post-Medieval			16.15	NAI	NAI	NAI
SH50356716		ENCLOSURE	Unknown			16.16	NAI	NAI	NAI
SH50356716		ENCLOSURE	Unknown			16.16	NAI	NAI	NAI
SH53017101	LB GII	BRIDGE	Post-Medieval			16.16	NAI	NAI	NAI
SH55507152		TERRACED GROUND	Post-Medieval			16.18	NAI	NAI	NAI
SH55507152		TERRACED GROUND	Post-Medieval			16.18	NAI	NAI	NAI
SH55507152		TERRACED GROUND	Post-Medieval			16.18	NAI	NAI	NAI
SH60207590	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60207590	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60447597	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60477597	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60207590	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60447597	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60477597	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60447598	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60487599	LB GII	BUILDING	Post-Medieval			16.21	HTL	HTL	MR
SH60557600	LB GII	BUILDING	Post-Medieval			16.22	HTL	HTL	MR
SH60607600		PIER	Post-Medieval			16.22	HTL	HTL	MR
SH60607600	LB GI	BUILDING	Post-Medieval			16.22	HTL	HTL	MR
SH60557600	LB GII	BUILDING	Post-Medieval			16.22	HTL	HTL	MR
SH60607600		PIER	Post-Medieval			16.22	HTL	HTL	MR
SH60607600	LB GI	BUILDING	Post-Medieval			16.22	HTL	HTL	MR
SH62107915		MOTTE	Medieval			16.25	NAI	NAI	NAI
SH62107915		FINDSPOT	NEOLITHIC			16.25	NAI	NAI	NAI
SH64078111		BUILDING	Post-Medieval			16.25	NAI	NAI	NAI
SH62107915		MOTTE	Medieval			16.25	NAI	NAI	NAI
SH62107915		FINDSPOT	NEOLITHIC			16.25	NAI	NAI	NAI
SH62107920		FINDSPOT	?NEOLITHIC			16.25	NAI	NAI	NAI
SH63008038C		QUARRY	Post-Medieval			16.25	NAI	NAI	NAI
SH64078111		BUILDING	Post-Medieval			16.25	NAI	NAI	NAI
SH59167284	LB GII	PUBLIC CONVENIENCE	Post-Medieval			16.29	HTL	HTL	HTL
SH59227264	LB GII	HOUSE	Unknown			16.29	HTL	HTL	HTL
SH59167284	LB GII	PUBLIC CONVENIENCE	Post-Medieval			16.29	HTL	HTL	HTL
SH61257230		COBBLED SURFACE	Medieval?			16.31	NAI	NAI	NAI
SH61257230		COBBLED SURFACE	Medieval?			16.31	NAI	NAI	NAI
SH61257230		COBBLED SURFACE	Medieval?			16.31	NAI	NAI	NAI
SH39026342		BREAKWATER	Post-Medieval			16.8	NAI	NAI	NAI
SH39026342		BREAKWATER	Post-Medieval			16.8	NAI	NAI	NAI
SH39026342		BREAKWATER	Post-Medieval			16.8	NAI	NAI	NAI
SH39026342		BREAKWATER	Post-Medieval			16.8	NAI	NAI	NAI
SH40406860		COAL MINE	Post-Medieval			16.9	HTL	HTL	HTL
SH40406860		COAL MINE	Post-Medieval			16.9	HTL	HTL	HTL
SH25468251		ENGINE HOUSE	Post-Medieval			17.15	HTL	HTL	HTL
SH25568289		LIGHTHOUSE	Post-Medieval			17.15	HTL	HTL	HTL

NGR	STATUS_NO	SITETYPE	PERIOD	NAME	TYPE	Policy Unit	Epoch 1	Epoch 2	Epoch 3
SH23768366		FOLLY	Post-Medieval			17.15	HTL	HTL	HTL
SH25688475	LB GII	LIGHTHOUSE	Post-Medieval			17.15	HTL	HTL	HTL
SH24798219		CLOCK TOWER	Modern			17.15	HTL	HTL	HTL
SH25468251		ENGINE HOUSE	Post-Medieval			17.15	HTL	HTL	HTL
SH25568289		LIGHTHOUSE	Post-Medieval			17.15	HTL	HTL	HTL
SH23768366		FOLLY	Post-Medieval			17.15	HTL	HTL	HTL
SH25688475	LB GII	LIGHTHOUSE	Post-Medieval			17.15	HTL	HTL	HTL
SH27598034	LB GII	TOLL HOUSE	Post-Medieval			17.17	NAI	NAI	NAI
SH27598034	LB GII	TOLL HOUSE	Post-Medieval			17.17	NAI	NAI	NAI
SH27967834		MOORING RING	Post-Medieval			17.19	MR	MR	MR
SH26577977A		TIDE MILL	Medieval?			17.19	MR	MR	MR
SH27967834		MOORING RING	Post-Medieval			17.19	MR	MR	MR
SH27967834		MOORING RING	Post-Medieval			17.19	MR	MR	MR
SH27967834		MOORING RING	Post-Medieval			17.19	MR	MR	MR
SH26577977A		TIDE MILL	Medieval?			17.19	MR	MR	MR
SH33396845		BUILDING	Post-Medieval?			17.4	NAI	NAI	NAI
SH33396845		BUILDING	Post-Medieval?			17.4	NAI	NAI	NAI
SH29159216A		RIDGE AND FURROW	Medieval?			18.1	NAI	NAI	NAI
SH34489336		CORN MILL	Unknown			18.1	NAI	NAI	NAI
SH29159216A		RIDGE AND FURROW	Medieval?			18.1	NAI	NAI	NAI
SH34489336		CORN MILL	Unknown			18.1	NAI	NAI	NAI
SH37329349		NONCONFORMIST CHAPEL	Post-Medieval			18.11	HTL	HTL	MR
SH38799503		WELL	Unknown			18.13	NAI	NAI	NAI
SH38799503		WELL	Unknown			18.13	NAI	NAI	NAI
SH40199465	SAM An 109	BRICKWORKS	Post-Medieval			18.14	MR	MR	NAI
SH40199465	SAM An 109	BRICKWORKS	Post-Medieval			18.14	MR	MR	NAI
SH40199465	SAM An 109	BRICKWORKS	Post-Medieval			18.14	MR	MR	NAI
SH45019339	LB GII	HOPPER	Post-Medieval			18.17	HTL	HTL	HTL
SH45019339	LB GII	HOPPER	Post-Medieval			18.17	HTL	HTL	HTL
SH29108590	SAM An 082	PROMONTORY FORT	Early-Medieval			18.3	MR	NAI	NAI
SH29108590	SAM An 082	PROMONTORY FORT	Early-Medieval			18.3	MR	NAI	NAI
SH29258614	LB GII	BUILDING	Post-Medieval			18.3	MR	NAI	NAI
SH52918100	LB GII	BUILDING	Post-Medieval			19.12	HTL	HTL	MR
SH52918100	LB GII	BUILDING	Post-Medieval			19.12	HTL	HTL	MR
SH52918100	LB GII	BUILDING	Post-Medieval			19.12	HTL	HTL	MR
SH52757995C		COTTAGE	Post-Medieval			19.14	MR	MR	MR
SH58218192A		INDUSTRIAL BUILDING	Post-Medieval			19.16	NAI	NAI	NAI
SH58218192A		INDUSTRIAL BUILDING	Post-Medieval			19.16	NAI	NAI	NAI
SH76858229	LB GII	TOLL HOUSE	Post-Medieval			20.11	HTL	HTL	MR
SH76418250		CAVE	Post-Medieval			20.11	HTL	HTL	MR
SH76418250		CAVE	Post-Medieval			20.11	HTL	HTL	MR
SH76938226		SHELL MIDDEN	Unknown			20.11	HTL	HTL	MR
SH76858229	LB GII	TOLL HOUSE	Post-Medieval			20.11	HTL	HTL	MR
SH76418250		CAVE	Post-Medieval			20.11	HTL	HTL	MR
SH76058290	SAM Cn 093	BISHOPS PALACE	Medieval			20.12	NAI	NAI	NAI
SH76078290	SAM Cn 093	GARDEN	Medieval			20.12	NAI	NAI	NAI
SH75878303		BANK (EARTHWORK)	Medieval			20.12	NAI	NAI	NAI
SH76058290	SAM Cn 093	BISHOPS PALACE	Medieval			20.12	NAI	NAI	NAI
SH76058290	SAM Cn 093	BISHOPS PALACE	Medieval			20.12	NAI	NAI	NAI
SH76078290	SAM Cn 093	GARDEN	Medieval			20.12	NAI	NAI	NAI
SH75878303		BANK (EARTHWORK)	Medieval			20.12	NAI	NAI	NAI
SH75468325		BUILDING	Modern			20.13	NAI	NAI	NAI
SH75458329		BUILDING	Modern			20.13	NAI	NAI	NAI
SH75188339		BUILDING	Modern			20.13	NAI	NAI	NAI
SH75028383		GUN EMPLACEMENT	Modern			20.13	NAI	NAI	NAI
SH75028383		GUN EMPLACEMENT	Modern			20.13	NAI	NAI	NAI
SH75468325		BUILDING	Modern			20.13	NAI	NAI	NAI
SH75458329		BUILDING	Modern			20.13	NAI	NAI	NAI
SH75318336		BUILDING	Modern			20.13	NAI	NAI	NAI
SH75188339		BUILDING	Modern			20.13	NAI	NAI	NAI
SH75028383		GUN EMPLACEMENT	Modern			20.13	NAI	NAI	NAI
SH70707620A		FINDSPOT	Prehistoric			20.2	HTL	HTL	HTL
SH78197772	LB GII	BUILDING	Post-Medieval			20.5	HTL	HTL	HTL
SH78197772	LB GII	BUILDING	Post-Medieval			20.5	HTL	HTL	HTL
SH78197772	LB GII	BUILDING	Post-Medieval			20.5	HTL	HTL	HTL
SH78197772	LB GII	BUILDING	Post-Medieval			20.5	HTL	HTL	HTL
SH78197772	LB GII	BUILDING	Post-Medieval			20.5	HTL	HTL	HTL
SH78197772	LB GII	BUILDING	Post-Medieval			20.5	HTL	HTL	HTL
SH78327740	LB GII	BRIDGE	Post-Medieval			20.6	HTL	HTL	MR
SH78327740	LB GII	BRIDGE	Post-Medieval			20.6	HTL	HTL	MR

ANNEX B - DETAILED ASSESSMENT TABLES FOR NATURA 2000 SITES

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 1: PDZ 1 – St Anne’s Head to Borough Head The coast within PDZ1 is currently undefended and subject to an NAI policy throughout the entire PDZ, therefore any changes are a result of natural processes and not the SMP2 policy.

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Limestone Coast of South West Wales/ Arfordir Calchfaen de Orllewin Cymru SAC – Outside the SMP2 boundary (ca. 8.5km) but has the potential to be affected by any changes in coastal processes as a result of the SMP.							
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	<ul style="list-style-type: none"> Habitat extent and distribution. Habitat condition. Population size and distribution of rare and scarce plants. 	<ul style="list-style-type: none"> Cliff and crevice vegetation continues to form a very open cover of deep-rooted crevice dwelling species forming a narrow band along the steep cliff edges. On their seaward edges the cliff and crevice communities grade into the supralittoral lichen zone. Landwards they meet the maritime grassland and thereophyte communities which themselves intermingle with the maritime heaths. Both golden samphire and rock sea lavenders are typically associated with crevices and ledges and continue to be generally widespread where open and exposed conditions prevail. The maritime grasslands range from short open swards with occasional areas of bare ground to taller, more closed swards where Red Fescue (<i>Festuca rubra</i>) forms tussocks and “mattresses”. The more strongly maritime influenced grassland communities on this site, for the most part, occur on the exposed south and south westerly facing slopes. Elsewhere, in less exposed situations the grasslands show less maritime influence with species such as Cowslips (<i>Primula veris</i>) and Bluebells (<i>Hyacinthoides non-scripta</i>) occurring. The grasslands also support important populations of typical invertebrates such as ants and butterflies as well as insects associated with open soils, grass roots or dung such as various cranefly and beetle larvae. Maritime heath occurs in exposed locations as stands of low, wind-pruned heath dominated by heather (<i>Calluna vulgaris</i>) and bell heather (<i>Erica cinerea</i>). Species such as spring squill (<i>Scilla verna</i>), milkworts (<i>Polygala</i> spp.) pale dog violet (<i>Viola lactea</i>) and sedges (<i>Carex</i> spp.) are present in stands. This gives way to gorse-dominated dry heath (feature 3) in more sheltered areas. Cliff and crevice vegetation occurs naturally on suitably exposed rocky ledges and crevices throughout the site. The variety of vegetation types reflecting the degree of exposure to maritime influences - including communities with thrift, rock and golden samphires, sea lavenders, sea-beet and sea plantain. Maritime Grassland occupies approximately 15% of the total site area. The following plants are common in the maritime grassland: thrift <i>Armeria maritima</i>; spring squill <i>Scilla verna</i> and sea plantain <i>Plantago maritima</i>. Maritime heathland occupies approximately 10% of the total site area. The following plants are common in the maritime heathland: heather; bell heather and spring squill. Populations of nationally rare and nationally scarce vascular and lower plant species, associated with cliff-crevice, maritime grassland and related calcareous grassland swards are maintained. Competitive species indicative of under-grazing, particularly cocksfoot <i>Dactylis glomerata</i>, tor grass <i>Brachypodium pinnatum</i>, bracken <i>Pteridium aquilinum</i> and western gorse <i>Ulex gallii</i> are kept in check. Non-native plants such as Hottentot fig <i>Carpobrotus edulis</i> are absent or rare. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann’s Head.</p> <p>No significant effect in the long term as the vegetated cliffs would be allowed to erode naturally, which would allow natural succession of vegetation.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Fixed dunes with herbaceous vegetation ('grey dunes')	NA	<ul style="list-style-type: none"> Habitat extent and distribution. Habitat condition. Population size and distribution of <i>Fulgensia fulgens</i> lichen sites. Condition of <i>Fulgensia</i> sites. 	<ul style="list-style-type: none"> Fixed dunes occupy approximately 20% of the total site area. The following plants will be common in a short, open sward: <i>Asperula cyanchica</i>, <i>Carlina vulgaris</i>, <i>Euphrasia</i> spp., <i>Gentianella amarella</i>, <i>Linum catharticum</i>, <i>Lotus corniculatus</i>, <i>Pilosella officinarum</i>, <i>Plantago coronopus</i>, <i>Sedum acre</i>, <i>Thymus polytrichus</i>, <i>Viola</i> spp., <i>Anacamptis pyramidalis</i>. Distinct patches of open, lichen-rich turf, supporting <i>Fulgensia fulgens</i> on <i>Trichosporum</i> moss will occur in several mapped locations in management units 2a, 2b, 3b and 3c. Alien species will be absent, and other negative indicator species (such as bracken) will be under control in fixed dune grassland. Sea Buckthorn <i>Hippophae rhamnoides</i> will be absent from all dunes systems within the SAC. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>No significant effect in the long term as the vegetated cliffs would be allowed to erode naturally, which would allow natural succession of vegetation, and response of intertidal mudflat and sandflat and dune habitats to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
European dry heaths	NA	<ul style="list-style-type: none"> Habitat extent and distribution. Habitat condition. 	<ul style="list-style-type: none"> The current extent of Dry heath will be maintained. Dry heath will occupy areas of the site where heathland extends beyond the zone of maritime influence. As a result dry heath may lack the species characteristic of maritime heath. Much of the dry heath will have a short and open structure. The dry heaths will support typical species such as the dark green fritillary (<i>Argynnis aglaja</i>) and the silver studded blue butterfly <i>Plebeius argus</i>. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p>	None required	No adverse effect expected	Yes
Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	NA	<ul style="list-style-type: none"> Habitat extent and distribution. Habitat quality. 	<ul style="list-style-type: none"> The Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) / Dry grasslands and scrublands on chalk or limestone will be referable to the NVC communities <i>Festuca – Avenula</i> grassland (CG2) and <i>Festuca – Hieracium – Thymus</i> grasslands (CG7). The communities making up this feature will cover at least 14ha within Castlemartin Cliffs and Dunes SSSI and 10ha within Stackpole and Stackpole Quay to Trewent Point SSSI, and 18ha within the Gower Coast SSSI (which also includes NVC community CG1) occurring as small patches along coastal cliff-tops, among the fixed dune grasslands, mainly on shallow soils overlying areas of limestone bedrock. The feature will support a range of typical plant and invertebrate species. 	<p>Loss of habitat may occur as a result of saline intrusion as a result of sea level rise; however, this is due to natural process rather than the SMP policy. The flooding extent over the 3 epochs does not appear to impact this habitat.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Caves not open to the public	NA	<ul style="list-style-type: none"> Extent and distribution of bats. Extent and distribution of chough nest sites in caves. Condition of caves. 	<ul style="list-style-type: none"> There is minimal disturbance to the caves by the public. The caves remain suitable as bat roost/hibernation sites. Caves utilised by breeding choughs remain undisturbed for choughs. The geological interest of the caves will be unconcealed. Natural processes such as small rock falls will be tolerated. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>The Bat roosts will not be impacted by the SMP2 policy.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Submerged or partially submerged sea caves	NA	<ul style="list-style-type: none"> Extent and distribution. Condition of caves. 	<ul style="list-style-type: none"> There should be minimal disturbance to the caves and they should remain closed to the public. The caves should remain suitable as bat roost/hibernation sites. The caves used by grey seal should remain free of human disturbance. The geological interest of the caves will be unconcealed. Natural processes such as small rock falls will be tolerated. The affects of tidal activity in partially submerged caves should have a minimal effect on the internal environment of the cave (where the cave is a bat roost). 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mudflats and sandflats not covered by seawater at low tide	NA		No conservation objectives identified in Core Management Plan.	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>No significant effect in the long term as the vegetated cliffs would be allowed to erode naturally, which would allow natural succession of vegetation, and response of intertidal mudflat and sandflat and dune habitats to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Embryonic shifting dunes	NA		No conservation objectives identified in Core Management Plan.	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")	NA		No conservation objectives identified in Core Management Plan.	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>No significant effect in the long term as vegetated cliffs within this PDZ would be allowed to erode naturally, which would ensure the continued supply of sediments for these dune habitats to respond naturally to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Humid dune slacks	NA		No conservation objectives identified in Core Management Plan.	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>	Caves not open to the public	<ul style="list-style-type: none"> Extent and distribution of greater horseshoe bats. Population in the core area 	<ul style="list-style-type: none"> Greater horseshoe bats will continue to utilise known caves roosts undisturbed by the public. Distinctive droppings indicate presence at any time of year but largest numbers of bats are likely to be found in the period November to March. The peak winter population in the main Castlemartin Cave is equivalent to approximately 20% of the Pembrokeshire Bat Sites and Bosherton lakes SAC greater horseshoe bat population. The greater horseshoe bat population within the caves being monitored is stable or increasing. Natural processes such as rock falls will be tolerated but other factors affecting the achievement of these conditions are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>Rocky cliffs would be allowed to erode naturally which would ensure the continued erosion (hollowing) of the caves.</p> <p>Loss of habitat may occur as a result increasing sea levels reducing the sizes of the caves, through this is a natural response to sea level rise and not as a result of the SMP2 policy.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Early gentian <i>Gentianella anglica</i>	<ul style="list-style-type: none"> Fixed dunes with herbaceous vegetation ('grey dunes') Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia) 	<ul style="list-style-type: none"> Species extent and distribution. Habitat extent and quality 	<ul style="list-style-type: none"> The feature will be present at Stackpole. Dune gentians with three or fewer internodes and a long terminal internode, which contributes between 40-100% of the height of the stem (corresponding to the current definition/description of Early gentian) occur within at least 4 open dry dune slacks on Stackpole Warren and in other open, herb-rich calcareous grassland areas. Further survey/research will confirm that these forms are definitely separable from <i>Gentianella amarelle</i>. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Petalwort <i>Petalophyllum ralfsii</i>	Fixed dunes with herbaceous vegetation ('grey dunes')	<ul style="list-style-type: none"> Distribution and population size. Habitat condition. 	<ul style="list-style-type: none"> <i>P. ralfsii</i> has a continued presence at Broomhill Burrows SSSI. <i>P. ralfsii</i> occurs at high densities in suitable dune slacks at Brownslade Burrows SSSI. At both sites there are areas of open, damp, calcareous dune slacks with patches of suitable and optimal habitat present. Suitable dune slacks have patches of bare ground that is being colonised by jelly lichens (<i>Collema</i> spp.) and <i>Barbula</i> mosses. Brownslade Burrows continues to be winter grazed by cattle and sheep, which is helping to maintain the short sward and open conditions required by <i>P. ralfsii</i>. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no indirect effects as a result of coastal management policy is expected since the designation is ca. 8.5km from the start of the PDZ 1 boundary at St. Ann's Head.</p> <p>No significant effect in the long term as the vegetated cliffs would be allowed to erode naturally, which would allow natural succession of vegetation, and response of intertidal mudflat and sandflat and dune habitats to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pembrokeshire Marine/ Sir Benfro Forol SAC							
Estuaries	NA	<ul style="list-style-type: none"> Range. Structure and function. Typical species. 	<ul style="list-style-type: none"> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the inlets and bays feature these include; the embayment of St. Brides Bay, the ria of Milford Haven, peripheral embayments and inlets. For the coastal lagoons feature this is subject to the requirements for maintenance of the artificial impoundment structure and maintenance of the lagoons for the original purpose or subsequent purpose that pre-dates classification of the site. The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include; geology, sedimentology, geomorphology, hydrography and meteorology, water and sediment chemistry, biological interactions. This includes a need for nutrient levels in the water column and sediments to be: at or below existing statutory guideline concentrations, within ranges that are not potentially detrimental to the long term maintenance of the features, species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: at or below existing statutory guideline concentrations, below levels that would potentially result in increase in contaminant concentrations within sediments or biota, below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include: species richness, population structure and dynamics, physiological health, reproductive capacity, recruitment, mobility, and range. 	No estuaries present in PDZ 1.	None required	No adverse effect expected	Yes
Large shallow inlets and bays	NA			No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.	None required	No adverse effect expected	Yes
Reefs	NA			No significant effect in the long term as the intertidal mudflat and dune habitats (as well as shore dock supporting habitat) can respond to sea level rise.	None required	No adverse effect expected	Yes
Sandbanks slightly covered by sea water all the time	NA			This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.	None required	No adverse effect expected	Yes
Mudflats and sandflats not covered by sea water at low tide	NA			<i>[A total of 3.2ha of the Pembrokeshire Marine SAC will be lost in epoch 1, with a total of 5.9ha lost in epoch 2 and a total of 10.2ha lost in epoch 3 as a result of the NAI policy option.]</i>	None required	No adverse effect expected	Yes
				<i>Given that the coast within PDZ 1 comprises natural cliffs and banks and has no man made defences – the loss of habitat is a result of natural processes.]</i>	None required	No adverse effect expected	Yes
Coastal lagoons	NA	Not present in PDZ 1.	None required	No adverse effect expected	Yes		

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>)	NA			No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.	None required	No adverse effect expected	Yes
Submerged or partially submerged sea caves	NA			No significant effect in the long term as the intertidal mudflat and dune habitats (as well as shore dock supporting habitat) can respond to sea level rise. This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1. [A total of 3.2ha of the Pembrokeshire Marine SAC will be lost in epoch 1, with a total of 5.9ha lost in epoch 2 and a total of 10.2ha lost in epoch 3 as a result of the NAI policy option. Given that the coast within PDZ 1 comprises natural cliffs and banks and has no man made defences – the loss of habitat is a result of natural processes and not the SMP2 policy.]	None required	No adverse effect expected	Yes
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 	<ul style="list-style-type: none"> Populations. Range. Supporting habitat and species. 	<ul style="list-style-type: none"> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that for otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression. For grey seal, populations should not be reduced as a consequence of human activity. The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for otter and grey seal: their range within the SAC and adjacent inter-connected areas is not constrained or hindered, there are appropriate and sufficient food resources within the SAC and beyond, and the sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing. The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include: distribution, extent, structure, function and quality of habitat, prey availability and quality. As part of this objective it should be noted that: the abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term, the management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term, contamination of potential prey species should be below concentrations potentially harmful to their physiological health, disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour, and for otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the intertidal mudflat and dune habitats (as well as shore dock supporting habitat) can respond to sea level rise.</p> <p>Grey seals occur along discreet areas of coastline within PDZ 1. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Shore dock <i>Rumex rupestris</i>	<ul style="list-style-type: none"> Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) 			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the intertidal mudflat and dune habitats (as well as shore dock supporting habitat) can respond to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Sea lamprey <i>Petromyzon marinus</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the intertidal mudflat and dune habitats can respond to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
River lamprey <i>Lampetra fluviatilis</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 		<ul style="list-style-type: none"> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that for otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression. For grey seal, populations should not be reduced as a consequence of human activity. The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for otter and grey seal: their range within the SAC and adjacent inter-connected areas is not constrained or hindered, there are appropriate and sufficient food resources within the SAC and beyond, and the sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing. The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include: distribution, extent, structure, function and quality of habitat, prey availability and quality. As part of this objective it should be noted that: the abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term, the management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term, contamination of potential prey species should be below concentrations potentially harmful to their physiological health, disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour, and for otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the intertidal mudflat and dune habitats can respond to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Allis shad <i>Alosa alosa</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the intertidal mudflat and dune habitats can respond to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Twaite shad <i>Alosa fallax</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the intertidal mudflat and dune habitats can respond to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Estuaries Reefs. Sandbanks slightly covered by sea water all the time Mudflats and sandflats not covered by seawater at low tide. Coastal lagoons. Atlantic salt meadows. 			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the intertidal mudflat and dune habitats can respond to sea level rise.</p> <p>Otters occur along a very limited length of coastline within PDZ 1. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Castlemartin Coast SPA							
Internationally important Article 4.1 Species (breeding): Chough <i>Pyrrhocorax pyrrhocorax</i>	Maritime grassland and heaths	<ul style="list-style-type: none"> Population distribution. Population size. Annual productivity. Feeding habitat extent. Feeding habitat quality. 	<ul style="list-style-type: none"> Breeding chough population will occur along the limestone coast, between Freshwater West and Barafundle Bay. This population will be maintained at a minimum of 12 breeding pairs (representing 3.5% of the GB population, at the 1993 SPA designation level). Choughs will continue to, feed, roost and breed successfully, unhindered by human recreational activities (e.g. climbing). The majority of pairs will rear young each year, with an annual average productivity of at least two young per occupied territory. Choughs will continue to have access to large amounts of optimal feeding habitat (open areas with very short grassland and heath vegetation <1cm to <3cm in height) within all cliff-top management units and within dune grassland management units at Broomhill Burrows, Brownslade and Linney Burrows and on Stackpole Warren. Yellow ant-hills, an important summer food resource, will occur in coastal turf, throughout the SPA, at densities up to approximately 550 ant-hills per ha. A non-breeding chough population (variable in number between 10 and 50 birds) made up largely of juvenile and sub-adult birds will occur at any season. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
	Sand dune			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the dune can naturally respond to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
	Maritime cliff and crevice			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect as the supporting habitat of rocky ledges would naturally develop during erosion.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
	Sea caves			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect as the supporting habitat of rocky ledges would naturally develop during erosion.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
	Vegetated sea cliffs of the Atlantic and Baltic coasts			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect as the supporting habitat of rocky ledges would naturally develop during erosion.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pembrokeshire Bat Sites and Bosherton Lakes/ Safleoedd Ystlum Sir Benfro a Llynno SAC							
Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	NA	<ul style="list-style-type: none"> Extent of standing water. Extent of <i>Chara hispida</i> beds. Vegetation composition: macrophyte community composition. Macrophyte community structure. Vegetation composition (negative indicator). 	<ul style="list-style-type: none"> Submerged <i>Chara</i> beds (mainly <i>Chara hispida</i> in places up to a metre long) will form the predominant submerged macrophyte vegetation throughout most of Central and Western Arms and Central Lake of Bosherton Lakes (unit 1a) and may be present in the Eastern Arm (unit 1b). <i>Chara</i> will occur at more than 50% frequency along regular surveillance transects within the Western and Central arms. <i>Chara</i> species (not necessarily <i>hispida</i>) will be present in other embayments and pools, including the Eastern Arm of Bosherton Lakes (unit 1b) and pools in the Mere Pool Valley (unit 1d). The Western and Central Arms are spring-fed, so nutrient levels here remain low. One of the main nutrients (phosphorous) will reach no more than 25 micrograms per litre in regular sampling areas. Nitrogen levels in the water will be low (less than 1 milligram per litre) and declining or stable. The Western Arm, Central Arm and Central Lake water will be fairly clear, but well vegetated with submerged and marginal plants. In natural openings (e.g. over springs) within otherwise dense <i>Chara</i> beds, a sechii disk will be viewable on the lakebed. Water depth will vary from about 3.5 metres OD (winter maximum) to about 0.5 metres or less in places in summer. Fringing the <i>Chara</i> beds, are beds of white water lilies <i>Nymphaea alba</i>. They will remain fairly abundant in the Western and Central Arms, with smaller populations in Central Lake. Reed and swamp and fringing burr-reed will be restricted to shallow zones – covering not more than 10 % of the site. All factors affecting the achievement of these conditions are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect long term as sea level rise or erosion would not extend into the site or result in any alteration to the physical characteristics of the site.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>	Roost sites	<ul style="list-style-type: none"> Breeding population roost distribution. Winter and intermediate roost population distribution. Maternity roost adult population size. Maternity roost productivity. Intermediate roost and hibernacula population. 	<ul style="list-style-type: none"> The greater horseshoe bat population will be capable of maintaining itself on a long-term basis as a viable component of its natural habitats. The natural range of greater horseshoe bats will neither be reduced nor will be likely to be reduced for the foreseeable future. There will be sufficient habitat to maintain its populations on a long-term basis. At least three SSSI maternity roosts will be occupied annually by adult greater horseshoe bats and their babies: Stackpole Courtyard Flats and Walled Garden, Slebech Stable Yard Loft, Cellars and Tunnels, and Felin Llwyngwair. Carew Castle SSSI will continue to be used as an intermediate greater horseshoe bat roost, during the spring and autumn, as a male summer roost and an autumn/spring mating roost. The greater horseshoe bat population at the component SSSI's will be stable or increasing. There will be a sufficiently large area of suitable habitat surrounding these roosts to support the bat population, including continuous networks of sheltered, broadleaved woodland, tree lines and hedgerows connecting the various types of roosts with areas of insect-rich grassland and open water. All factors affecting the achievement of these conditions are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect long term as sea level rise or erosion would not extend into the site or result in any alteration to the physical characteristics of the site.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	Roost sites	<ul style="list-style-type: none"> Breeding population roost distribution. Winter and intermediate roost population distribution. Maternity roost adult population size. 	<ul style="list-style-type: none"> The Lesser horseshoe bat population will be capable of maintaining itself on a long-term basis as a viable component of its natural habitats. The natural range of lesser horseshoe bats will be neither being reduced nor will be likely to be reduced for the foreseeable future. There will be sufficient habitat to maintain its populations on a long-term basis. At least four SSSI maternity roosts will be occupied annually by adult lesser horseshoe bats and their babies: Beech Cottage, Waterwynch SSSI, Orielson Stable Block and Cellars SSSI, Park House Outbuildings SSSI, and Stackpole Courtyard Flats and Walled Garden SSSI. Lesser horseshoe population at component SSSIs stable or increasing. There will be a sufficiently large area of suitable habitat surrounding these roosts to support the bat population, including continuous networks of sheltered, broadleaved woodland, tree lines and hedgerows connecting the various types of roosts with areas of insect-rich grassland and open water. All factors affecting the achievement of these conditions are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect long term as sea level rise or erosion would not extend into the site or result in any alteration to the physical characteristics of the site.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Otter <i>Lutra lutra</i>	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp.</i>	<ul style="list-style-type: none"> Otter population extent. Otter breeding activity. 	<ul style="list-style-type: none"> The Otter population will be capable of maintaining itself on a long-term basis as a viable component of its natural habitats. The natural range of otters will neither be reduced nor will be likely to be reduced for the foreseeable future. There will be sufficient habitat to maintain its populations on a long-term basis. The otter population will be stable or increasing. There will be a sufficiently large area of suitable habitat to support an otter breeding population, including: open water with sufficient food resources (notably eels and other fish species) and a continuous network of undisturbed sheltered resting places along the lake shoreline – including swamp, broadleaved woodland and calcareous scrub. All factors affecting the achievement of these conditions are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect long term as sea level rise or erosion would not extend into the site or result in any alteration to the physical characteristics of the site.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Skokholm and Skomer SPA							
Internationally important Article 4.1 Species: Chough <i>Pyrrhocorax pyrrhocorax</i>	Shingle. Sea cliffs. Islets	<ul style="list-style-type: none"> Breeding population. Breeding productivity. 	<ul style="list-style-type: none"> The Skomer breeding population will be at least 3 pairs. The Skokholm breeding population will be at least 1 pair. The SPA breeding population will be 4 pairs, (this currently represents around 5 % of the Pembrokeshire chough population and 1.2% of the GB population). Breeding success will be 1.5 chicks/pair. Sufficient suitable habitat will be present to support the populations. The factors affecting the feature are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect long term as the supporting habitat of sea cliff and shingle beaches would naturally develop during erosion. Through loss of coastal heathland habitat may occur this is a result of natural processes.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Internationally important Article 4.1 Species: short-eared Owl <i>Asio flammeus</i>	Shingle. Sea cliffs. Islets	<ul style="list-style-type: none"> Breeding population size. Availability of nest sites. 	<ul style="list-style-type: none"> The breeding population will be at least 6 pairs. Breeding success will be at least 1 chicks/pair. Sufficient suitable habitat will be present to support the populations. The factors affecting the feature are under control. 	<p>No HTL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect long term as the supporting habitat of sea cliff and shingle beaches would naturally develop during erosion. Through loss of coastal heathland habitat may occur this is a result of natural processes.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Internationally important Article 4.1 Species (breeding): storm petrel <i>Hydrobates pelagicus</i> .	Shingle. Sea cliffs. Islets	<ul style="list-style-type: none"> Breeding population size. Breeding productivity. Availability of nest sites. 	<ul style="list-style-type: none"> The population of storm petrel will be at least 3500 pairs within the SPA. Sufficient suitable nesting sites will be present to support at least the current populations. The factors affecting the feature are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the supporting habitat of sea cliff and shingle beaches would naturally develop during erosion. Though loss of coastal heathland habitat may occur this is a result of natural processes.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Article 4.2 Species: lesser black-backed gull <i>Larus fuscus</i>	Shingle. Sea cliffs. Islets	<ul style="list-style-type: none"> Population size. Adult survival rate. Breeding productivity. Availability of nest sites. 	<ul style="list-style-type: none"> During the breeding season the population of lesser black-backed gull will be at least 20,300 pairs within the SPA. This represents around 16.4% of the current breeding Western European/Mediterranean/western African population. Breeding success will be at least 0.4 chicks/pair. Sufficient suitable nesting sites will be present to support at least the current populations. The factors affecting the feature are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the supporting habitat of sea cliff and shingle beaches would naturally develop during erosion. Though loss of coastal heathland habitat may occur this is a result of natural processes.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Article 4.2 Species (breeding): Manx shearwater <i>Puffinus puffinus</i>	Shingle. Sea cliffs. Islets	<ul style="list-style-type: none"> Population size. Adult survival rate. Breeding productivity. 	<ul style="list-style-type: none"> During the breeding season the population of Manx shearwater will be at least 150,000 pairs within the SPA (this represents around half of the current breeding population). Breeding success will be at least 0.5 chicks per egg laid. The factors affecting the feature are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the supporting habitat of sea cliff and shingle beaches would naturally develop during erosion. Though loss of coastal heathland habitat may occur this is a result of natural processes.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Article 4.2 Species (breeding): Puffin <i>Fratercula arctica</i>	Shingle. Sea cliffs. Islets	<ul style="list-style-type: none"> Population size. Adult survival rate. Breeding productivity. 	<ul style="list-style-type: none"> During the breeding season the population of puffins will be at least 9,500 pairs within the SPA, (this represents at least 1.1% of the current breeding population). Breeding success will be 0.7 chicks/pair. The factors affecting the feature are under control. 	<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the supporting habitat of sea cliff and shingle beaches would naturally develop during erosion. Though loss of coastal heathland habitat may occur this is a result of natural processes.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes
Grassholm SPA							
Article 4.2 Species (breeding): Gannet <i>Morus bassanus</i>	Shingle. Sea cliffs. Islets			<p>No HTL, ATL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the supporting habitat of sea cliff and shingle beaches would naturally develop during erosion. Though loss of coastal heathland habitat may occur this is a result of natural processes.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 2: PDZ 2 – Borough Head to Dinas Fach

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pembrokeshire Marine/ Sir Benfro Forol SAC							
Estuaries	NA	<ul style="list-style-type: none"> Range. Structure and function. Typical species. 	<ul style="list-style-type: none"> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the inlets and bays feature these include; the embayment of St. Brides Bay, the ria of Milford Haven, peripheral embayments and inlets. The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include; geology, sedimentology, geomorphology, hydrography and meteorology, water and sediment chemistry, biological interactions. This includes a need for nutrient levels in the water column and sediments to be: at or below existing statutory guideline concentrations, within ranges that are not potentially detrimental to the long term maintenance of the features, species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: at or below existing statutory guideline concentrations, below levels that would potentially result in increase in contaminant concentrations within sediments or biota, below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include: species richness, population structure and dynamics, physiological health, reproductive capacity, recruitment, mobility, and range. 	<p>Not present in PDZ 2.</p> <p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>The SAC includes the wide, shallow, predominantly sandy embayment of St Brides Bay (PDZ 2). The wide range of environmental conditions, particularly seabed substrates, tidal streams and salinity gradients, supports high community and species diversity.</p> <p>The preferred management options within the St Bride's Bay range from NAI, HTL and MR.</p> <p>HTL policy is only planned for epochs 1 and 2 (PU 2.2, 2.4, and 2.6) with MR planned for the 3rd epoch. Coastal squeeze may be observed during epochs 1 and 2, and a change in the coastal processes may be observed as a result of MR in epoch 3. However, the extent of the shallow inlet and bay features (i.e. intertidal sand and shingle) would only be affected in the locality of the settlements, and would not reduce the total area of shallow inlet and bays features. Furthermore, MR in the 3rd epoch would ensure that development of constrained intertidal habitat would occur.</p> <p>MR realignment is the preferred option at PU2.2 (epoch 3), PU2.4 (epoch 3), PU2.5 (Epoch 2 – with NAI planned for epoch 3), PU2.6 (epoch 3), PU2.8 (Epochs 2 and 3), PU 2.10 (all 3 epochs) PU2.11 (epochs 1 and 2) and PU2.12 (epochs 1 and 2).</p> <p>NAI at Ricketts Head (PU2.9) will result in the loss of the tidal pools; however this is a result of natural processes and not the SMP.</p>	None required	No adverse effect expected	Yes
Large shallow inlets and bays	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Small areas of intertidal and subtidal reefs occur in the St Bride's Bay within PDZ 2.</p> <p>NAI policies will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease.</p> <p>Local HTL could cause habitat loss of the rocky intertidal in the long term as sea levels rise and the shore is squeezed, under such conditions the area of subtidal reefs would increase in extent. Therefore, there is likely to be an adverse effect on the integrity of the SAC. MR in the long term would ensure that coastal squeeze would not be an issue.</p> <p>The HTL policy is only intended along frontages where there are beaches or within embayments comprising only intertidal habitats, and as such would not directly impact on reef or subtidal sandbanks. The subtidal line would move up the existing intertidal sandflats but would not be expected to reach defences, and therefore the extent of subtidal sandbank would not reduce as a result of the HTL policy at specific locations. In addition, any changes</p>	None required	No adverse effect expected	Yes
Reefs	NA				None required	No adverse effect expected	Yes
Sandbanks slightly covered by sea water all the time	NA				None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
				to coastal processes of the HTL or MR policies would be localised to the immediate area of the defences and would not extend beyond the intertidal areas or embayments.			
Mudflats and sandflats not covered by sea water at low tide	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>HTL policy at a number of smaller sections of the coast within PDZ 2 in epochs 1 and 2 may result in the loss of intertidal mud and sand flats in front of the defences as a result of coastal squeeze.</p> <p>Coastal squeeze as a result of the SMP policy will be particularly apparent in the areas where there is low lying land behind the defence. The policy units where low lying ground occurs behind the defences includes: PUs 2.5, 2.10 and 2.11.</p> <p>There is a policy of MR in each of these areas in response to coastal pressure, with the long term intent of allowing the shingle bank at the back of the beach to respond naturally. This would include losing the road to allow retreat landward in response to sea level rise. The SAC does not extend above the low water mark within PU 2.10 and 2.11; therefore there will be no impact.</p> <p>The coastal squeeze will be most significant within PUs 2.2 (epochs 1 and 2), 2.4 (epochs 1 and 2), 2.5 (epoch 1), 2.6 (epochs 1 and 2), and 2.8 (epoch 1), where intertidal sandflat habitat will be lost due to the HTL policies in epochs 1 and sometimes epoch 2. However the coastal squeeze will be alleviated under MR in epochs 2 or 3 and will be able to respond naturally in the long term with NAI in epoch 3. There will however be an adverse impact in epochs 1 and 2 from the HTL policy and this could result in a loss of sandflat habitat of 0.76ha in epoch 1, and 0.99ha in epoch 2, totalling 1.75ha of sandflat habitat in total.</p> <p>MR is the preferred policy in epoch 3 for a number of locations and the preferred policy for all 3 epochs at Newgale Sands South and North. The MR policies will allow the coastal processes to return to a more natural state through sustainable management; therefore no adverse effect can be concluded for epochs 2 and 3.</p> <p>MR at Little Haven will allow the defence line to be moved back within the constraints of the hard rock cliff forming the narrow valley, avoiding coastal squeeze.</p> <p>NAI at several locations along the coast of PDZ 2 will allow for natural erosion of the coast allowing the mud and sand flats to respond to sea level rise.</p> <p>A total of 10ha will be lost from the areas of NAI – however – the majority of this is mainly related to the cliffs which are not a feature of this SAC.</p>	None identified	Conclude adverse effect due to the loss of intertidal sandflat feature.	No
Coastal lagoons	NA			Not present in PDZ 2.	None required	No adverse effect expected	Yes
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	NA			<p><u>Coastal Squeeze / Coastal Processes and Saline Intrusion:</u></p> <p>Not present in PDZ 2.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Submerged or partially submerged sea caves	NA			<u>Coastal Squeeze/ Coastal Processes:</u> The caves located within PDZ 2 may be lost as the sea level rises and the cliffs erode naturally – however, new caves will be created as part of the natural process.	None required	No adverse effect expected	Yes
Shore dock <i>Rumex rupestris</i>	<ul style="list-style-type: none"> Atlantic salt meadows (Glauco-Puccinellietalia maritima) 			NAI at several locations along the coast of PDZ 2 will allow for natural erosion of the coast allowing the mud and sand flats to respond to sea level rise, however, MR and HTL policies within the main settlement areas will result in a loss of habitat due to coastal squeeze.	None required	No adverse effect expected	Yes
Sea lamprey <i>Petromyzon marinus</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 			No estuaries present within this PDZ. HTL policy is only planned for epochs 1 and 2 (PU 2.2, 2.4, and 2.6) with MR planned for the 3 rd epoch. Coastal squeeze may be observed during epochs 1 and 2, and a change in the coastal processes may be observed as a result of MR in epoch 3.	None required	No adverse effect expected	Yes
River lamprey <i>Lampetra fluviatilis</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 			MR realignment is the preferred option at PU 2.2 (epoch 3), PU 2.4 (epoch 3), PU 2.5 (Epoch 2 – with NAI planned for epoch 3), PU 2.6 (epoch 3), PU 2.8 (Epochs 2 and 3), PU 2.10 (all 3 epochs) PU 2.11 (epochs 1 and 2) and PU 2.12 (epochs 1 and 2). NAI at Ricketts Head (PU2.9) will result in the loss of the tidal pools; however this is a result of natural processes and not the SMP. It is unlikely that any obstructions will occur that will reduce access to the habitats for these species.			
Allis shad <i>Alosa alosa</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 			No estuaries present within this PDZ. HTL policy is only planned for epochs 1 and 2 (PU 2.2, 2.4, and 2.6) with MR planned for the 3 rd epoch. Coastal squeeze may be observed during epochs 1 and 2, and a change in the coastal processes may be observed as a result of MR in epoch 3.	None required	No adverse effect expected	Yes
Twaite shad <i>Alosa fallax</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 			MR policy options may change the coastal processes within the Bay as a whole as a result of the realigned defences particularly at Newgale Sands South (PU 2.10) over all 3 epochs. MR realignment is also the preferred option at PU 2.2 (epoch 3), PU 2.4 (epoch 3), PU 2.5 (Epoch 2 – with NAI planned for epoch 3), PU 2.6 (epoch 3), PU 2.8 (Epochs 2 and 3), PU 2.11 (epochs 1 and 2) and PU 2.12 (epochs 1 and 2). NAI at Ricketts Head (PU 2.9) will result in the loss of the tidal pools; however this is a result of natural processes and not the SMP.			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Estuaries Reefs. Sandbanks slightly covered by sea water all the time Mudflats and sandflats not covered by seawater at low tide. Coastal lagoons. Atlantic salt meadows. 			<p>Pembrokeshire in south-west Wales is representative of grey seal <i>Halichoerus grypus</i> colonies in the south-western part of the breeding range in the UK. It is the largest breeding colony on the west coast south of the Solway Firth, representing over 2% of annual UK pup production.</p>			
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries Mudflats and sandflats not covered by sea water at low tide 	<ul style="list-style-type: none"> Populations. Range. Supporting habitat and species. 	<ul style="list-style-type: none"> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that for otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression. For grey seal, populations should not be reduced as a consequence of human activity. The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for otter and grey seal: their range within the SAC and adjacent inter-connected areas is not constrained or hindered, there are appropriate and sufficient food resources within the SAC and beyond, and the sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing. The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include: distribution, extent, structure, function and quality of habitat, prey availability and quality. As part of this objective it should be noted that: the abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term, the management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term, contamination of potential prey species should be below concentrations potentially harmful to their physiological health, disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour, and for otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. 	<p>No estuaries present within this PDZ.</p> <p>HTL policy is only planned for epochs 1 and 2 (PU 2.2, 2.4, and 2.6) with MR planned for the 3rd epoch. Coastal squeeze may be observed during epochs 1 and 2, and a change in the coastal processes may be observed as a result of MR in epoch 3.</p> <p>MR realignment is also the preferred option at PU 2.2 (epoch 3), PU 2.4 (epoch 3), PU 2.5 (Epoch 2 – with NAI planned for epoch 3), PU 2.6 (epoch 3), PU 2.8 (Epochs 2 and 3), PU 2.10 (all 3 epochs), PU 2.11 (epochs 1 and 2) and PU 2.12 (epochs 1 and 2).</p> <p>NAI at Ricketts Head (PU 2.9) will result in the loss of the tidal pools; however this is a result of natural processes and not the SMP.</p> <p>As a result of preferred policies (not including area of NAI) a total of 0.04ha of habitat will be lost within PUs 2.2, 2.4, 2.5, 2.6 and 2.8 in epoch 1; 0.1ha in epoch 2; and 0.1ha in epoch 3.</p> <p>Grey seals and otters may occur along discreet areas of coastline within PDZ 2. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Afonydd Cleddau/ Cleddau Rivers SAC							
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	NA	<ul style="list-style-type: none"> Distribution within catchment. Typical species. 	<ul style="list-style-type: none"> The capacity for the habitats in the SAC to support each feature at near-natural population levels, as determined by predominantly unmodified ecological and hydromorphological processes and characteristics, should be maintained as far as possible, or restored where necessary. The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality, physical habitat and community composition and structure. It is anticipated that in most instances these limits will concur with the standards used by the Review of Consents process. Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state, in order to support the coherence of ecosystem structure and function across the whole area of the SAC. All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes cause them to change. Flows, water quality, substrate quality and quantity at fish spawning sites and nursery areas will not be depleted by abstraction, discharges, engineering or gravel extraction activities or other impacts to the extent that these sites are damaged or destroyed. The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC, including, but not limited to, revetments on active alluvial river banks using stone, concrete or waste materials, unsustainable extraction of gravel, addition or release of excessive quantities of fine sediment, will be avoided. River SSSI features should be in favourable condition. Artificial factors impacting on the capability of each species feature to occupy the full extent of its natural range should be modified where necessary to allow passage, eg. weirs, bridge sills, acoustic barriers. The reservoir dams on the Syfynwy are excluded. Natural factors such as waterfalls, which may limit the natural range of a species feature or dispersal between naturally isolated populations, should not be modified. Flows during the normal migration periods of sea and river lamprey will not be depleted by abstraction to the extent that passage upstream to spawning sites is hindered. Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each WFD water body in the Cleddau SAC, and measures taken to maintain nutrients below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Levels of all other water quality parameters that could affect the distribution and abundance of all species will be agreed between EA and CCW for each WFD water body in the Cleddau SAC, and measures taken to maintain pollution below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Potential sources of pollution not addressed in the Review of Consents, such as contaminated land, will be considered in assessing plans and projects. Potential sources of pollution not addressed in the review of consents, such as contaminated land, will be considered in assessing plans and projects. Levels of suspended solids will be agreed between EA and CCW for each WFD water body in the Usk SAC. Measures including, but not limited to, the control of suspended sediment generated by agriculture, forestry and engineering works, will be taken to maintain suspended solids below these levels. 	<p><u>Saline intrusion:</u></p> <p>MR policy within PU 2.10 and PU 2.11 adjacent to the Cleddau Rivers SAC will not result in an impact to the watercourses. NAI policy along the remaining coast adjacent to the SAC will result in natural erosion of the coast. The flooding extent over the 3 epochs will not encroach on the freshwater courses of this SAC.</p> <p>In the long term the water course habitat will not change or be obstructed by the planned policies.</p> <p>The MR policy may lead to short term impacts on the condition of the water course and/or obstruction of Annex II species as a result of construction or maintenance measures. However, these are likely to be short term and will be addressed at the Flood Risk Management Strategy Level.</p> <p>No interests feature will be lost or adversely affected due to the SMP2 policies in PDZ 2.</p>	None required	No adverse effect expected	Yes
Active raised bogs	NA	Extent.	On the mire expanse there are at least 3 of <i>Calluna vulgaris</i> ,	As above for Water courses of plain to montane levels	None required	No adverse effect	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
		<ul style="list-style-type: none"> Habitat composition. 	<ul style="list-style-type: none"> <i>Erica tetralix</i>, <i>Eriophorum angustifolium</i>, <i>E.vaginatum</i> & <i>Trichophorum cespitosum</i> constant, with a combined cover not exceeding 80%. No single species > 50% cover. At least one of <i>Andromeda polifolia</i>, <i>Drosera rotundifolia</i>, <i>Empetrum nigrum</i>, <i>Narthecium ossifragum</i> and <i>Vaccinium oxycoccos</i> occurs at least frequently. On the mire expanse only there are at least 2 of the following spp. constant, with a combined cover > 20%: <i>Sphagnum capillifolium</i>, <i>S. magellanicum</i>, <i>S. papillosum</i>, <i>S. tenellum</i>. No reduction in extent of microtopographic features (e.g. bog pools). 				
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	NA	<ul style="list-style-type: none"> Extent. Quality. Structure and processes. Regeneration. Non-native species. Ground flora. 	<ul style="list-style-type: none"> The canopy is dominated by single stands of alder <i>Alnus glutinosa</i> or willow <i>Salix</i> spp. In alluvial woods with free draining soils there may be ash or oak in the canopy, but in the wetter alluvial woodlands ash <i>Fraxinus excelsior</i> is more likely to be limited to areas of relatively drier ground. The structure of alluvial woodland is recognised as being dynamic therefore the presence of over mature trees is desirable but not essential. The river itself should be dynamic to allow for areas of outwash and deposition that trees can regenerate on. Lying or standing deadwood (> 20cm diameter and > 1m length) is present at all sites. The feature should support alluvial ground flora including two of the following: meadowsweet <i>Filipendula ulmaria</i>, yellow flag <i>Iris pseudacorus</i>, nettle <i>Urtica dioica</i>, common reed <i>Phragmites australis</i>, greater tussock sedge <i>Carex paniculata</i>, opposite-leaved golden saxifrage <i>Chrysosplenium oppositifolium</i>, rushes <i>Juncus</i> spp, tufted hair-grass <i>Deschampsia cespitosa</i>, hemlock water-dropwort <i>Onanthe crocata</i>, and wild angelica <i>Angelica sylvestris</i>. 	with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation.	expected		
Brook lamprey <i>Lampetra planeri</i>	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	<ul style="list-style-type: none"> Age/size structure of ammocoete population. Distribution of ammocoetes within catchment. Ammocoete density. 	<ul style="list-style-type: none"> The conservation objective for the watercourse as defined above is met. The population of the feature in the SAC must be stable or increasing over the long term. The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. Passage of the feature through the SAC is not to be hindered by artificial barriers such as weirs. The characteristic channel morphology provides the diversity of water depths, current velocities and substrate types necessary to fulfil the habitat requirements of the features. The close proximity of different habitats facilitates movement of fish to new preferred habitats with age. 				
River lamprey <i>Lampetra fluviatilis</i>							

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bullhead <i>Cottus gobio</i>	Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	<ul style="list-style-type: none"> • Adult densities. • Distribution. • Reproduction / age • Structure. 	<ul style="list-style-type: none"> • The conservation objective for the watercourse as defined above must be met. • The population of the feature in the SAC must be stable or increasing over the long term. • The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • The natural range is taken to mean those reaches where suitable habitat for each life stage exists over the long term. • Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, water depth and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. • Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. • Passage of the feature through the SAC is not to be hindered by artificial barriers such as weirs. • The characteristic channel morphology provides the diversity of water depths, current velocities and substrate types necessary to fulfil the habitat requirements of the features. The close proximity of different habitats facilitates movement of fish to new preferred habitats with age. 				
Otter <i>Lutra lutra</i>	•	<ul style="list-style-type: none"> • Distribution. • Breeding activity. • Actual and potential breeding sites. 	<ul style="list-style-type: none"> • The population of otters in the SAC is stable or increasing over the long term and reflects the natural carrying capacity of the habitat within the SAC. • The SAC will have sufficient habitat, including riparian trees and vegetation and wetlands, to support the otter population. • The natural range of otters in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • The otter must be able to breed and recruit successfully in the SAC. The size of breeding territories may vary depending on prey abundance. • Otter food sources must be sufficient for maintenance of the population. • The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat, and underpasses, ledges, fencing etc at road bridges and other artificial barriers. • No otter breeding site should be subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance must be managed. 	As above for Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation.	None required	No adverse effect expected	Yes
Sea lamprey <i>Petromyzon marinus</i>	•	<ul style="list-style-type: none"> • Distribution within catchment. • Ammocoete density. 	<ul style="list-style-type: none"> • The conservation objective for the watercourse is met. • The population of the feature in the SAC must be stable or increasing over the long term. • The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. • Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. • Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. • Passage of the feature through the SAC is not to be hindered by artificial barriers such as weirs. • The characteristic channel morphology provides the diversity of water depths, current velocities and substrate types necessary to fulfil the habitat requirements of the features. The close proximity of different habitats facilitates movement of fish to new preferred habitats with age. 				

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Ramsey and St David's Peninsula Coast SPA							
Internationally important Article 4.1 Species (breeding): Chough <i>Pyrrhocorax pyrrhocorax</i>	Shingle. Sea cliffs. Islets	<ul style="list-style-type: none"> Breeding population Breeding productivity Foraging habitat condition 	<ul style="list-style-type: none"> The breeding population of Chough is at least 11 pairs. Breeding success averages at least 2.5 chicks/pair. Sufficient suitable habitat is present to support the populations. The factors affecting the feature are under control. 	<u>Coastal Squeeze / Coastal Processes and Restriction of coastal erosion:</u> The SPA is located in the Northern most part of the PDZ 2 within the PU 2.13. The preferred policy within the PU is NAI for all epochs, which will allow for rocky ledges to develop naturally due to erosion of the sea cliffs in the long term. Within PU 2.13 a total of 2ha of cliff habitat will be lost to natural processes over the 3 epochs.	None required	No adverse effect expected	Yes
	Marine areas. Sea inlets			<u>Coastal Squeeze / Coastal Processes:</u> HTL policy is only planned for epochs 1 and 2 (PU 2.2, 2.4, and 2.6) with MR planned for the 3 rd epoch. Coastal squeeze may be observed during epochs 1 and 2, and a minor change in the coastal processes may be observed as a result of MR in epoch 3. MR policy options may change the coastal processes within the Bay as a whole as a result of the realigned defences particularly at Newgale Sands South (PU2.10) over all 3 epochs. MR realignment is also the preferred option at PU 2.2 (epoch 3), PU 2.4 (epoch 3), PU 2.5 (Epoch 2 – with NAI planned for epoch 3), PU 2.6 (epoch 3), PU 2.8 (Epochs 2 and 3), PU 2.11 (epochs 1 and 2) and PU 2.12 (epochs 1 and 2). NAI at Ricketts Head (PU 2.9) will result in the loss of the tidal pools; however this is a result of natural processes and not the SMP.	None required	No adverse effect expected	Yes
	Coastal sand dunes. Sand beaches. Machair			<u>Coastal Squeeze / Coastal Processes:</u> The NAI policy in PU 2.13, where an area of coastal sandflat occurs would allow natural migration of the sand dunes ensuring no coastal squeeze, and thus habitat loss not being an issue in the medium to long term.	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
St David's / Ty Ddewi SAC							
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	<p>Cliff and Crevice</p> <ul style="list-style-type: none"> Extent of Maritime Cliff and Crevice vegetation Condition of Maritime Cliff and Crevice vegetation <p>Maritime Grassland</p> <ul style="list-style-type: none"> Extent of Maritime grassland vegetation Condition of Maritime grassland vegetation <p>Maritime Heathland</p> <ul style="list-style-type: none"> Extent of Maritime heathland vegetation Condition of Maritime heathland vegetation 	<p>Cliff and Crevice</p> <ul style="list-style-type: none"> Cliff and crevice vegetation will occur naturally on suitable cliff sections throughout the site. The vegetation will be composed of native plants such as sea spurrey <i>Spergularia rupicola</i> and sea samphire <i>Crithmum maritimum</i>. The establishment of non-native plants such as Hottentot fig <i>Carpobrotus edulis</i> will be discouraged. The factors affecting the feature are under control <p>Maritime Grassland</p> <ul style="list-style-type: none"> Maritime Grassland will occupy at least x% of the total site area (to be set). The following plants will be common in the maritime grassland: thrift <i>Armeria maritima</i>; spring squill <i>Scilla verna</i> and sea plantain <i>Plantago maritima</i> Competitive species indicative of under-grazing, particularly cocksfoot <i>Dactylis glomerata</i>, bracken <i>Pteridium aquilinum</i> and western gorse <i>Ulex gallii</i> will be kept in check. The factors affecting the feature are under control. <p>Maritime Heathland</p> <ul style="list-style-type: none"> Maritime heathland will occupy at least x% of the total site area (to be set). The following plants will be common in the maritime heathland: heather <i>Calluna vulgaris</i>; bell heather <i>Erica cinerea</i> and spring squill <i>Scilla verna</i>. Competitive species indicative of under-grazing, particularly bracken <i>Pteridium aquilinum</i> and gorse <i>Ulex europaeus</i> will be kept in check. The factors affecting the feature are under control. 	<p><u>Restriction of coastal erosion:</u></p> <p>The SAC is located in the Northern most part of the PDZ 2 within the PU 2.13. The preferred policy within the PU is NAI for all epochs, which will allow for rocky ledges to develop naturally due to erosion in the long term.</p>	None required	No adverse effect expected	Yes
European dry heaths	NA		<ul style="list-style-type: none"> Dry Heath will occupy areas of the site where heathland extends beyond the zone of maritime influence and lacks the species characteristic of maritime heath as a result Much of the dry heath will be short and open. The factors affecting the feature are under control. 				

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 3: PDZ 3 – Dinas Fach to Pen Anglas

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pembrokeshire Marine/ Sir Benfro Forol SAC							
Estuaries	NA	<ul style="list-style-type: none"> Range. Structure and function. Typical species. 	<ul style="list-style-type: none"> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the inlets and bays feature these include; the embayment of St.Brides Bay, the ria of Milford Haven, peripheral embayments and inlets. For the coastal lagoons feature this is subject to the requirements for maintenance of the artificial impoundment structure and maintenance of the lagoons for the original purpose or subsequent purpose that pre-dates classification of the site. The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include; geology, sedimentology, geomorphology, hydrography and meteorology, water and sediment chemistry, biological interactions. This includes a need for nutrient levels in the water column and sediments to be: at or below existing statutory guideline concentrations, within ranges that are not potentially detrimental to the long term maintenance of the features, species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: at or below existing statutory guideline concentrations, below levels that would potentially result in increase in contaminant concentrations within sediments or biota, below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include: species richness, population structure and dynamics, physiological health, reproductive capacity, recruitment, mobility, and range. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>HTL within the estuary at Solva (PU 3.2 and PU 3.5) may result in coastal squeeze of the intertidal habitat; however, the estuary habitat itself is not expected to reduce in area.</p> <p>HTL in the estuary is not expected to result in change to coastal processes.</p> <p>Over time, regular tidal flooding will occur, however, given that the preferred policy within the estuary is HTL the estuary habitat may be lost over time as a result of sea level rise. There is no intention to increase the defences along the estuary, therefore the SMP2 policy will not have an adverse impact compared to the policy already in place.</p> <p>The outer estuary is subject to NAI and the cliffs will be able to erode naturally, therefore potentially widening the mouth of the estuary. In the long term the estuary and the associated habitat may change, but the feature would be maintained overall.</p>	None required	No adverse effect expected	Yes
Large shallow inlets and bays	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Pembrokeshire Marine SAC in south-west Wales includes the wide, shallow, predominantly sandy embayment of St Brides Bay (and extends into PDZ 3). The wide range of environmental conditions, particularly seabed substrates, tidal streams and salinity gradients, supports high community and species diversity.</p> <p>The policies within the Bay area are primarily NAI along the open coast and HTL within the estuaries.</p> <p>However, the extent of the shallow inlet and bay features (i.e. intertidal sand and shingle) would only be affected in the locality of the settlements and no reduction in the overall area of shallow inlet and bay features or noticeable alteration to the structure would occur.</p> <p>No quantitative figures are available to the loss/gain of this particular habitat features, but it is not expected that the SMP2 policies will have a significant impact.</p>	None required	No adverse effect expected	Yes
Reefs	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Subtidal and intertidal reefs are located along the coastline within PDZ 3.</p> <p>NAI policies will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. A HTL will cause habitat loss of the rocky intertidal in the long term as sea levels rise and the shore is squeezed, under such conditions the area of subtidal reefs would increase in extent. Therefore, there is likely to be an adverse effect on the integrity of the SAC. MR in the long term would ensure that coastal squeeze would not</p>	Explore adaptive defence options as hard defences come under increased pressure during the first epoch. For example, local realignment would ensure that the integrity of the interest features would be maintained	No adverse effect expected	Yes
Sandbanks slightly covered by sea water all the time	NA						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
				<p>be an issue.</p> <p>The HTL policy is only intended along frontages where there are beaches or within embayments comprising only intertidal habitats, and as such would not directly impact on reef or subtidal sandbanks. The subtidal line would move up the existing intertidal sandflats but would not be expected to reach defences, and therefore the extent of subtidal sandbank would not reduce as a result of the HTL policy at specific locations. In addition, any changes to coastal processes of the HTL or MR policies would be localised to the immediate area of the defences and would not extend beyond the intertidal areas or embayments.</p>			
Mudflats and sandflats not covered by sea water at low tide	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Sand and mud flat habitats within the estuaries may experience habitat loss as a result of the HTL policies.</p> <p>Habitats on the undefended coastline within PU 3.1, 3.6, 3.7 and 3.12 will be able to respond naturally to sea level rise.</p> <p>The sandflats at most risk of coastal squeeze are located in PUs 3.2 (epochs 1 and 2), 3.3 (all epochs), 3.4 (epoch 1), 3.5 (epoch 1), and 3.8 (epoch 1).</p> <p>As a result HTL policies there will be an adverse effect in epoch 1 in PUs 3.2, 3.3, 3.4, 3.5, and 3.8 where there is a policy of HTL (resulting in the loss of 0.29ha of sandflat); in epoch 2 in PUs 3.2, 3.3 and 3.5 (resulting in the loss of 0.47ha of sandflat), and in epoch 3 in PUs 3.3 and 3.5 (resulting in the loss of 0.11ha of sandflat habitat).</p> <p>In total, up to 0.87ha of intertidal sandflat could be lost as a result of the HTL policies for some or all epochs at localised areas.</p>	<p>Explore adaptive defence options as hard defences come under increased pressure within the first epoch. For example, local realignment would ensure that the integrity of the interest features would be maintained</p>	<p>Cannot conclude 'no adverse effect'.</p>	No
Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>)	NA			<p>Not present in PDZ 3.</p>			
Coastal lagoons	NA			<p>Not Present in PDZ 3.</p>	<p>None required</p>	<p>No adverse effect expected</p>	Yes
Submerged or partially submerged sea caves	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>There is the potential for sea caves to be located along the entire coastline between PU 3.1 and 3.9. There is no information to state their exact location in relation to the coastal defences.</p> <p>The caves located within PDZ 3 may be lost as the sea level rises and the cliffs erode naturally – however, new caves will be created as part of the natural process.</p> <p>As the HTL policies within PDZ 3 are not located adjacent to areas of cliff, the presence of inshore submerged caves amongst the intertidal and subtidal mobile sediments is not likely; consequently there will be no adverse impact on the integrity of the cave feature of this SAC.</p> <p>Policy for management does not include areas containing this feature.</p>	<p>None required</p>	<p>No adverse effect expected</p>	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?	
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 	<ul style="list-style-type: none"> Populations. Range. Supporting habitat and species. 	<ul style="list-style-type: none"> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that for otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression. For grey seal, populations should not be reduced as a consequence of human activity. The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for otter and grey seal: their range within the SAC and adjacent inter-connected areas is not constrained or hindered, there are appropriate and sufficient food resources within the SAC and beyond, and the sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing. The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include: distribution, extent, structure, function and quality of habitat, prey availability and quality. As part of this objective it should be noted that: the abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term, the management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term, contamination of potential prey species should be below concentrations potentially harmful to their physiological health, disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour, and for otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. 	<p>Pembrokeshire is representative of grey seal colonies in the south-western part of the breeding range in the UK. It is the largest breeding colony on the west coast south of the Solway Firth, representing over 2% of annual UK pup production.</p> <p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>HTL within the estuary at Solva (PU 3.2 and PU 3.5) may result in coastal squeeze of the intertidal habitat; however, the estuary itself is not expected to reduce.</p> <p>The policy for PU 3.8 is HTL/MR/MR, with the intent to realign defences as pressure on the present line increases. This would allow natural processes to be restored.</p> <p>HTL may result in loss of intertidal habitat within the harbour, however, as this is a populated area, it is unlikely that it will be used by seals as a haul out site. In addition the seals food resource is unlikely to be affected as the estuary itself will not be reduced by the preferred policies, therefore the extent of feeding resource available to the seals will consequently not be reduced.</p> <p>Grey seals occur along most of the coastline within this SAC and PDZ 3 (specific locations not available). However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out/pupping sites.</p>	None required	No adverse effect expected	Yes	
Shore dock <i>Rumex rupestris</i>	<ul style="list-style-type: none"> Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) 				<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Supporting saltmarsh habitat not present in PDZ 3.</p>	None required	No adverse effect expected	Yes
Sea lamprey <i>Petromyzon marinus</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 				<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>HTL within the estuary at Solva (PU 3.2 and PU 3.5) may result in coastal squeeze of the intertidal habitat; however, the estuary itself is not expected to reduce.</p> <p>Obstruction is unlikely to occur as a result of the preferred policy options as the river will continue to behave in its natural way.</p> <p>In addition the river lamprey food resource is unlikely to be affected as the estuary itself will not be reduced by the preferred policies, therefore the extent of feeding resource available to the river lamprey will consequently not be reduced.</p>	None required	No adverse effect expected	Yes
River lamprey <i>Lampetra fluviatilis</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 				<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>HTL within the estuary at Solva (PU 3.2 and PU 3.5) may result in coastal squeeze of the intertidal habitat; however, the estuary itself is not expected to reduce.</p> <p>In addition shad food resource is unlikely to be affected as the estuary itself will not be reduced by the preferred policies, therefore the extent of feeding resource available to the shad will consequently not be reduced.</p>	None required	No adverse effect expected	Yes
Allis shad <i>Alosa alosa</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 					None required	No adverse effect expected	Yes
Twaite shad <i>Alosa fallax</i>	<ul style="list-style-type: none"> Large shallow inlets and bays Estuaries 					None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> • Estuaries • Reefs. • Sandbanks slightly covered by sea water all the time • Mudflats and sandflats not covered by seawater at low tide. • Coastal lagoons. • Atlantic salt meadows. 		<ul style="list-style-type: none"> • The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that for otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression. For grey seal, populations should not be reduced as a consequence of human activity. • The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for otter and grey seal: their range within the SAC and adjacent inter-connected areas is not constrained or hindered, there are appropriate and sufficient food resources within the SAC and beyond, and the sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing. • The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include: distribution, extent, structure, function and quality of habitat, prey availability and quality. As part of this objective it should be noted that: the abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term, the management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term, contamination of potential prey species should be below concentrations potentially harmful to their physiological health, disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour, and for otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>The HTL policy within the estuaries at Solva (PU 3.2 and PU 3.5) lie outwith the SAC boundary, so are therefore not expected to have an impact.</p> <p>HTL within the estuary at Solva (PU 3.2 and PU 3.5) may result in coastal squeeze of the intertidal habitat; however, the estuary itself is not expected to reduce.</p> <p>It is not possible to quantify the exact amount of otter habitat lost due to the SMP2 policies, however, it can be anticipated that the otter will most likely occur along the banks of the estuary (away from populated areas) – therefore potentially within PUs 3.2 and 3.3. However, the habitat will only reduce in size rather than total loss, and it is not expected to affect otter movement or feeding resource.</p> <p>In addition otter food resource is unlikely to be affected as the estuary itself will not be reduced by the preferred policies, therefore the extent of feeding resource available to the otter will consequently not be reduced.</p> <p>Habitats on the undefended coastline within PU 3.1, 3.6, 3.7 and 3.12 will be able to respond naturally to sea level rise.</p> <p>Otters may occur along discreet and limited areas of coastline from time to time within PDZ 2. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting overall on the otter population.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Afonydd Cleddau/ Cleddau Rivers SAC							
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	NA	<ul style="list-style-type: none"> Distribution within catchment. Typical species. 	<ul style="list-style-type: none"> The capacity for the habitats in the SAC to support each feature at near-natural population levels, as determined by predominantly unmodified ecological and hydromorphological processes and characteristics, should be maintained as far as possible, or restored where necessary. The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality, physical habitat and community composition and structure. It is anticipated that in most instances these limits will concur with the standards used by the Review of Consents process. Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state, in order to support the coherence of ecosystem structure and function across the whole area of the SAC. All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes cause them to change. Flows, water quality, substrate quality and quantity at fish spawning sites and nursery areas will not be depleted by abstraction, discharges, engineering or gravel extraction activities or other impacts to the extent that these sites are damaged or destroyed. The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC, including, but not limited to, revetments on active alluvial river banks using stone, concrete or waste materials, unsustainable extraction of gravel, addition or release of excessive quantities of fine sediment, will be avoided. River SSSI features should be in favourable condition. Artificial factors impacting on the capability of each species feature to occupy the full extent of its natural range should be modified where necessary to allow passage, eg. weirs, bridge sills, acoustic barriers. The reservoir dams on the Syfynwy are excluded. Natural factors such as waterfalls, which may limit the natural range of a species feature or dispersal between naturally isolated populations, should not be modified. Flows during the normal migration periods of sea and river lamprey will not be depleted by abstraction to the extent that passage upstream to spawning sites is hindered. Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each WFD water body in the Cleddau SAC, and measures taken to maintain nutrients below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Levels of all other water quality parameters that could affect the distribution and abundance of all species will be agreed between EA and CCW for each WFD water body in the Cleddau SAC, and measures taken to maintain pollution below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Potential sources of pollution not addressed in the Review of Consents, such as contaminated land, will be considered in assessing plans and projects. Potential sources of pollution not addressed in the review of consents, such as contaminated land, will be considered in assessing plans and projects. Levels of suspended solids will be agreed between EA and CCW for each WFD active water body in the Usk SAC. Measures including, but not limited to, the control of suspended sediment generated by agriculture, forestry and engineering works, will be taken to maintain suspended solids below these levels. 	<p><u>Saline intrusion:</u></p> <p>MR policy within PDZ 3 adjacent to the Cleddau Rivers SAC will not result in an impact to the watercourses. NAI policy along the remaining coast adjacent to the SAC will result in natural erosion of the coast. The flooding extent over the 3 epochs will not encroach on the freshwater courses of this SAC.</p> <p>In the long term the water course habitat will not change or be obstructed by the planned policies.</p> <p>The MR policy may lead to short term impacts on the condition of the water course and/or obstruction of Annex II species as a result of construction or maintenance measures. However, these are likely to be short term and will be addressed at the Flood Risk Management Strategy Level.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 1.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Active raised bogs	NA	<ul style="list-style-type: none"> Extent. Habitat composition. 	<ul style="list-style-type: none"> On the mire expanse there are at least 3 of <i>Calluna vulgaris</i>, <i>Erica tetralix</i>, <i>Eriophorum angustifolium</i>, <i>E. vaginatum</i> & <i>Trichophorum cespitosum</i> constant, with a combined cover not exceeding 80%. No single species > 50% cover. At least one of <i>Andromeda polifolia</i>, <i>Drosera rotundifolia</i>, <i>Empetrum nigrum</i>, <i>Narthecium ossifragum</i> and <i>Vaccinium oxycoccos</i> occurs at least frequently. On the mire expanse only there are at least 2 of the following spp. constant, with a combined cover > 20%: <i>Sphagnum capillifolium</i>, <i>S. magellanicum</i>, <i>S. papillosum</i>, <i>S. tenellum</i>. No reduction in extent of microtopographic features (e.g. bog pools). 				
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	NA	<ul style="list-style-type: none"> Extent. Quality. Structure and processes. Regeneration. Non-native species. Ground flora. 	<ul style="list-style-type: none"> The canopy is dominated by single stands of alder <i>Alnus glutinosa</i> or willow <i>Salix</i> spp. In alluvial woods with free draining soils there may be ash or oak in the canopy, but in the wetter alluvial woodlands ash <i>Fraxinus excelsior</i> is more likely to be limited to areas of relatively drier ground. The structure of alluvial woodland is recognised as being dynamic therefore the presence of over mature trees is desirable but not essential. The river itself should be dynamic to allow for areas of outwash and deposition that trees can regenerate on. Lying or standing deadwood (> 20cm diameter and > 1m length) is present at all sites. The feature should support alluvial ground flora including two of the following: meadowsweet <i>Filipendula ulmaria</i>, yellow flag <i>Iris pseudacorus</i>, nettle <i>Urtica dioica</i>, common reed <i>Phragmites australis</i>, greater tussock sedge <i>Carex paniculata</i>, opposite-leaved golden saxifrage <i>Chrysosplenium oppositifolium</i>, rushes <i>Juncus</i> spp, tufted hair-grass <i>Deschampsia cespitosa</i>, hemlock water-dropwort <i>Oenanthe crocata</i>, and wild angelica <i>Angelica sylvestris</i>. 				
Brook lamprey <i>Lampetra planeri</i> River lamprey <i>Lampetra fluviatilis</i>	Water courses of plain to montane levels with the <i>Ranuncion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	<ul style="list-style-type: none"> Age/size structure of ammocoete population. Distribution of ammocoetes within catchment. Ammocoete density. 	<ul style="list-style-type: none"> The conservation objective for the watercourse as defined above is met. The population of the feature in the SAC must be stable or increasing over the long term. The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. Passage of the feature through the SAC is not to be hindered by artificial barriers such as weirs. The characteristic channel morphology provides the diversity of water depths, current velocities and substrate types necessary to fulfil the habitat requirements of the features. The close proximity of different habitats facilitates movement of fish to new preferred habitats with age. 				

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bullhead <i>Cottus gobio</i>		<ul style="list-style-type: none"> • Adult densities. • Distribution. • Reproduction / age • Structure. 	<ul style="list-style-type: none"> • The conservation objective for the watercourse as defined above must be met. • The population of the feature in the SAC must be stable or increasing. • The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. • Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. • Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. • Passage of the feature through the SAC is not to be hindered by artificial barriers such as weirs. • The characteristic channel morphology provides the diversity of water depths, current velocities and substrate types necessary to fulfil the habitat requirements of the features. The close proximity of different habitats facilitates movement of fish to new preferred habitats with age. 				
Otter <i>Lutra lutra</i>		<ul style="list-style-type: none"> • Distribution. • Breeding activity. • Actual and potential breeding sites. 	<ul style="list-style-type: none"> • The population of otters in the SAC is stable or increasing over the long term and reflects the natural carrying capacity of the habitat within the SAC. • The SAC will have sufficient habitat, including riparian trees and vegetation and wetlands, to support the otter population. • The natural range of otters in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • The otter must be able to breed and recruit successfully in the SAC. The size of breeding territories may vary depending on prey abundance. • Otter food sources must be sufficient for maintenance of the population. • The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat, and underpasses, ledges, fencing etc at road bridges and other artificial barriers. • No otter breeding site should be subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance must be managed. 				
Sea lamprey <i>Petromyzon marinus</i>		<ul style="list-style-type: none"> • Distribution within catchment. • Ammocoete density. 	<ul style="list-style-type: none"> • The conservation objective for the watercourse is met. • The population of the feature in the SAC must be stable or increasing over the long term. • The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. • Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. • Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. • Passage of the feature through the SAC is not to be hindered by artificial barriers such as weirs. • The characteristic channel morphology provides the diversity of water depths, current velocities and substrate types necessary to fulfil the habitat requirements of the features. The close proximity of different habitats facilitates movement of fish to new preferred habitats with age. 				

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Ramsey and St David's Peninsula Coast SPA							
Internationally important Article 4.1 Species (breeding): Chough <i>Pyrrhocorax pyrrhocorax</i>	Shingle. Sea cliffs. Islets	<ul style="list-style-type: none"> Breeding population Breeding productivity Foraging habitat condition 	<ul style="list-style-type: none"> The breeding population of Chough is at least 11 pairs. Breeding success averages at least 2.5 chicks/pair. Sufficient suitable habitat is present to support the populations. The factors affecting the feature are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Much of the natural coastline has a preferred policy of NAI which will allow the vegetated cliffs erode naturally in the long term allowing natural succession. The NAI policy will not result in the active intervention of the natural processes, enabling the integrity of this feature to continue.</p> <p>The sandflats at most risk of coastal squeeze are located in PUs 3.2, 3.3, 3.4, 3.5, and 3.8 where there will be a loss of 0.87ha of habitat over the 3 epochs. The length of coastline within this SAC and PDZ that comprises sandflats is approximately 3,900km.</p> <p>There are currently no man-made defences in place around the Ramsay Island, therefore no impact from the NAI will occur as a result of the SMP policy.</p> <p>Not possible to identify the area of Machair with the available data.</p> <p>A total of 0.6ha of intertidal and cliff base habitat will be lost in epoch 1; 2ha in epoch 2, and 6ha in epoch 3.</p> <p>As the cliffs are able to continue moving landward naturally in response to sea level rise – the SPA feature which uses these cliffs to feed on adjacent short-grazed grassland or machair, then they will be not be adversely effected. Whilst the negligible (in context to actual remaining sandflat habitat including that created where the coast can respond naturally to sea level rise) loss of sandflat would not be expected to affect the chough population.</p>	None required	No adverse effect expected	Yes
	Marine areas. Sea inlets						
	Coastal sand dunes. Sand beaches. Machair						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
St David's / Ty Ddewi SAC							
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	<p>Cliff and Crevice</p> <ul style="list-style-type: none"> Extent of Maritime Cliff and Crevice vegetation Condition of Maritime Cliff and Crevice vegetation <p>Maritime Grassland</p> <ul style="list-style-type: none"> Extent of Maritime grassland vegetation Condition of Maritime grassland vegetation <p>Maritime Heathland</p> <ul style="list-style-type: none"> Extent of Maritime heathland vegetation Condition of Maritime heathland vegetation 	<p>Cliff and Crevice</p> <ul style="list-style-type: none"> Cliff and crevice vegetation will occur naturally on suitable cliff sections throughout the site. The vegetation will be composed of native plants such as sea spurrey <i>Spergularia rupicola</i> and sea samphire <i>Crithmum maritimum</i>. The establishment of non-native plants such as Hottentot fig <i>Carpobrotus edulis</i> will be discouraged. The factors affecting the feature are under control <p>Maritime Grassland</p> <ul style="list-style-type: none"> Maritime Grassland will occupy at least x% of the total site area (to be set). The following plants will be common in the maritime grassland: thrift <i>Armeria maritima</i>; spring squill <i>Scilla verna</i> and sea plantain <i>Plantago maritima</i> Competitive species indicative of under-grazing, particularly cocksfoot <i>Dactylis glomerata</i>, bracken <i>Pteridium aquilinum</i> and western gorse <i>Ulex gallii</i> will be kept in check. The factors affecting the feature are under control. <p>Maritime Heathland</p> <ul style="list-style-type: none"> Maritime heathland will occupy at least x% of the total site area (to be set). The following plants will be common in the maritime heathland: heather <i>Calluna vulgaris</i>; bell heather <i>Erica cinerea</i> and spring squill <i>Scilla verna</i>. Competitive species indicative of under-grazing, particularly bracken <i>Pteridium aquilinum</i> and gorse <i>Ulex europaeus</i> will be kept in check. The factors affecting the feature are under control 	<p><u>Restriction of coastal erosion:</u></p> <p>The majority of the coastline of the St David's SAC has a preferred policy of NAI. In the long term as the vegetated cliffs would naturally erode this would allow for natural succession of vegetation.</p>	None required	No adverse effect expected	Yes
European dry heaths	NA		<ul style="list-style-type: none"> Dry Heath will occupy areas of the site where heathland extends beyond the zone of maritime influence and lacks the species characteristic of maritime heath as a result Much of the dry heath will be short and open. The factors affecting the feature are under control 	<p>The majority of the coastline of the St David's SAC has a preferred policy of NAI. In the long term as the vegetated cliffs would naturally erode, which would allow for natural succession of the European dry heaths on the shallower slopes and in the hinterland of these cliffs.</p>	None required	No adverse effect expected	Yes
Floating water-plantain <i>Luronium natans</i>	Heathland pools	<ul style="list-style-type: none"> Extent of population Distribution of population 	<ul style="list-style-type: none"> At least one population is well established. This population covers at least 15 square metres in two or more separate pools. Current areas of open water to be maintained on Ramsey; other pool habitats within the SAC to be kept in a suitable state for <i>Luronium</i> where possible. The factors affecting the feature are under control 	<p>The two larger pools – and one tiny satellite – on Ramsey Island are an internationally significant site for floating water-plantain <i>Luronium natans</i>. Rain-fed lowland pools, usually in heaths, are now an exceptionally rare habitat, and the population here is maintained by a combination of excellent management, favourable topography and clean rain.</p> <p>The majority of the coastline of the St David's SAC has a preferred policy of NAI. In the long term the coast will be respond naturally to sea level rise, which may include the loss of the pools; however as the coastline in question as natural sea defences, the loss will be a result of natural processes and not the SMP2 policies.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
North West Pembrokeshire Commons/ Comins Gogledd Orllewin Sir Benfro SAC							
European dry heaths	NA	<ul style="list-style-type: none"> Extent of dry heath Condition of dry heath Distribution of dry heath 	<ul style="list-style-type: none"> Dry heath will cover between 1% and 30% of the site area and display a range of plant and insect species typical of the habitat. The following plants will be common in the dry heath: heather <i>Calluna vulgaris</i>; bell heather <i>Erica cinerea</i> and western gorse <i>Ulex gallii</i>. Competitive species indicative of under-grazing, particularly bracken <i>Pteridium aquilinum</i> and purple moor-grass <i>Molinia caerulea</i> will be kept in check. Western gorse <i>Ulex gallii</i> will not exceed 50% cover. 70% of dry heath will be "good condition" dry heath. All factors affecting the achievement of these conditions, including grazing and scrub/bracken encroachment are under control. 	<p><u>Saline intrusion:</u> No impact as the site and features are inland.</p> <p>The North Pembrokeshire Commons SAC is located approximately 0.73 km for the nearest coastal point (PU 3.6). From the GIS data, the present day, 50 year and 100 year flood extents, will not impact on the features of this SAC.</p>	None required	No adverse effect expected	Yes
Transition mires and quaking bogs	NA	<ul style="list-style-type: none"> Extent of TM&QB Condition of TM&QB Distribution of TM&QB 	<ul style="list-style-type: none"> TM&QB will cover at least 9ha of the site and display a range of plant and invertebrate species typical of the habitat. <i>Potentilla palustris</i>, <i>Carex diandra</i>, <i>Carex rostrata</i>, <i>Menyanthes trifoliata</i>, <i>Hypericum elodes</i>, <i>Pedicularis palustris</i> will be common, forming a quaking raft of vegetation. <i>Juncus effusus</i> will be at less than 5% cover. 70% of TM&QB will be good condition, where open water species will be present; large sedges, negative indicator species and scrub will be absent; grasses form <5% cover. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u> No impact as the site and features are inland.</p> <p>The North Pembrokeshire Commons SAC is located approximately 0.73 km for the nearest coastal point (PU 3.6). From the GIS data, the present day, 50 year and 100 year flood extents, will not impact on the features of this SAC.</p>	None Required	No adverse effect expected	Yes
Northern Atlantic wet heaths with <i>Erica tetralix</i>	NA	<ul style="list-style-type: none"> Extent of wet heath Condition of wet heath Distribution of wet heath 	<ul style="list-style-type: none"> Wet heath will cover at least 14.5 ha of the site and display a range of plant and invertebrate species typical of the habitat. The following plants will be common in the dry heath: heather <i>Calluna vulgaris</i>; Cross-leaved heath <i>Erica tetralix</i> as well as bog moss <i>Sphagnum</i> spp. and <i>Narthecium ossifragum</i>. Competitive species indicative of under-grazing, particularly bracken <i>Pteridium aquilinum</i>, purple moor-grass <i>Molinia caerulea</i> and western gorse <i>Ulex gallii</i> will be kept in check. 70% of wet heath will be "good condition" wet heath. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u> No impact as the site and features are inland.</p> <p>The North Pembrokeshire Commons SAC is located approximately 0.73 km for the nearest coastal point (PU 3.6). From the GIS data, the present day, 50 year and 100 year flood extents, will not impact on the features of this SAC.</p>	None Required	No adverse effect expected	Yes
<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caeruleae</i>)	NA	<ul style="list-style-type: none"> Extent of <i>Molinia</i> Meadows Condition of <i>Molinia</i> Meadows Distribution of <i>Molinia</i> Meadows 	<ul style="list-style-type: none"> <i>Molinia</i> meadows habitat will cover at least 22 ha of the site and display a range of plant and invertebrate species typical of the habitat. 70% of the <i>Molinia</i> meadows habitat in each area of habitat will be described as being in good condition. The SAC marshy grassland will be dominated by <i>Molinia caerulea</i>, typically with a species-rich mixture of short sedges, forbs and bryophytes. One or more of <i>Carex pulicaris</i>, <i>Carex hostiana</i> or <i>Cirsium dissectum</i> must be at least frequent. Competitive species indicative of under-grazing, particularly <i>Molinia</i> itself, will be kept in check. Scrub species such as willow <i>Salix</i> and birch <i>Betula</i> will also be largely absent from the marshy grassland. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u> No impact as the site and features are inland.</p> <p>The North Pembrokeshire Commons SAC is located approximately 0.73 km for the nearest coastal point (PU 3.6). From the GIS data, the present day, 50 year and 100 year flood extents, will not impact on the features of this SAC.</p>	None Required	No adverse effect expected	Yes
Floating water-plantain <i>Luronium natans</i>	Heathland pools	<ul style="list-style-type: none"> Population size Extent of population Reproductive capability Distribution of population Sufficient habitat 	<ul style="list-style-type: none"> There will be at least two populations, in separate waterbodies. There will be no contraction in the extent of <i>L. natans</i> populations. <i>L. natans</i> populations will be viable & able to maintain themselves on a long-term basis <i>L. natans</i> must be able to complete sexual and/or vegetative reproduction successfully. The waterbodies will have sufficient suitable habitat to support viable <i>L. natans</i> populations and to allow for future expansion of the population. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u> No impact as the site and features are inland.</p> <p>The North Pembrokeshire Commons SAC is located approximately 0.73 km for the nearest coastal point (PU 3.6). From the GIS data, the present day, 50 year and 100 year flood extents, will not impact on the features of this SAC.</p>	None Required	No adverse effect expected	Yes

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 4: PDZ 4 – Pen Anglas to Pen-y-Bal

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Afonydd Cleddau/ Cleddau Rivers SAC							
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	NA	<ul style="list-style-type: none"> Distribution within catchment. Typical species. 	<ul style="list-style-type: none"> The capacity for the habitats in the SAC to support each feature at near-natural population levels, as determined by predominantly unmodified ecological and hydromorphological processes and characteristics, should be maintained as far as possible, or restored where necessary. The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality, physical habitat and community composition and structure. It is anticipated that in most instances these limits will concur with the standards used by the Review of Consents process. Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state, in order to support the coherence of ecosystem structure and function across the whole area of the SAC. All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes cause them to change. Flows, water quality, substrate quality and quantity at fish spawning sites and nursery areas will not be depleted by abstraction, discharges, engineering or gravel extraction activities or other impacts to the extent that these sites are damaged or destroyed. The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC, including, but not limited to, revetments on active alluvial river banks using stone, concrete or waste materials, unsustainable extraction of gravel, addition or release of excessive quantities of fine sediment, will be avoided. River SSSI features should be in favourable condition. Artificial factors impacting on the capability of each species feature to occupy the full extent of its natural range should be modified where necessary to allow passage, eg. weirs, bridge sills, acoustic barriers. The reservoir dams on the Syfynwy are excluded. Natural factors such as waterfalls, which may limit the natural range of a species feature or dispersal between naturally isolated populations, should not be modified. Flows during the normal migration periods of sea and river lamprey will not be depleted by abstraction to the extent that passage upstream to spawning sites is hindered. Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each WFD water body in the Cleddau SAC, and measures taken to maintain nutrients below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Levels of all other water quality parameters that could affect the distribution and abundance of all species will be agreed between EA and CCW for each WFD water body in the Cleddau SAC, and measures taken to maintain pollution below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Potential sources of pollution not addressed in the Review of Consents, such as contaminated land, will be considered in assessing plans and projects. Potential sources of pollution not addressed in the review of consents, such as contaminated land, will be considered in assessing plans and projects. Levels of suspended solids will be agreed between EA and CCW for each WFD active water body in the Usk SAC. Measures including, but not limited to, the control of suspended sediment generated by agriculture, forestry and engineering works, will be taken to maintain suspended solids below these levels. 	<p>The Cleddau Rivers SAC is located approximately 3 km from the nearest PU within PDZ 4. The flooding and erosion extent over the 3 epochs does not impact on this SAC or any of the relevant interest features.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 4.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Active raised bogs	NA	<ul style="list-style-type: none"> Extent. Habitat composition. 	<ul style="list-style-type: none"> On the mire expanse there are at least 3 of <i>Calluna vulgaris</i>, <i>Erica tetralix</i>, <i>Eriophorum angustifolium</i>, <i>E.vaginatum</i> & <i>Trichophorum cespitosum</i> constant, with a combined cover not exceeding 80%. No single species > 50% cover. At least one of <i>Andromeda polifolia</i>, <i>Drosera rotundifolia</i>, <i>Empetrum nigrum</i>, <i>Nartheicum ossifragum</i> and <i>Vaccinium oxycoccos</i> occurs at least frequently. On the mire expanse only there are at least 2 of the following spp. constant, with a combined cover > 20%: <i>Sphagnum capillifolium</i>, <i>S. magellanicum</i>, <i>S. papillosum</i>, <i>S. tenellum</i>. No reduction in extent of microtopographic features (e.g. bog pools). 				
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	NA	<ul style="list-style-type: none"> Extent. Quality. Structure and processes. Regeneration. Non-native species. Ground flora. 	<ul style="list-style-type: none"> The canopy is dominated by single stands of alder <i>Alnus glutinosa</i> or willow <i>Salix</i> spp. In alluvial woods with free draining soils there may be ash or oak in the canopy, but in the wetter alluvial woodlands ash <i>Fraxinus excelsior</i> is more likely to be limited to areas of relatively drier ground. The structure of alluvial woodland is recognised as being dynamic therefore the presence of over mature trees is desirable but not essential. The river itself should be dynamic to allow for areas of outwash and deposition that trees can regenerate on. Lying or standing deadwood (> 20cm diameter and > 1m length) is present at all sites. The feature should support alluvial ground flora including two of the following: meadowsweet <i>Filipendula ulmaria</i>, yellow flag <i>Iris pseudacorus</i>, nettle <i>Urtica dioica</i>, common reed <i>Phragmites australis</i>, greater tussock sedge <i>Carex paniculata</i>, opposite-leaved golden saxifrage <i>Chrysosplenium oppositifolium</i>, rushes <i>Juncus</i> spp, tufted hair-grass <i>Deschampsia cespitosa</i>, hemlock water-dropwort <i>Oenanthe crocata</i>, and wild angelica <i>Angelica sylvestris</i>. 				
Brook lamprey <i>Lampetra planeri</i>	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	<ul style="list-style-type: none"> Age/size structure of ammocoete population. Distribution of ammocoetes within catchment. Ammocoete density. 	<ul style="list-style-type: none"> The conservation objective for the watercourse as defined above is met. The population in the SAC must be stable or increasing over the long term. The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. Passage of the feature through the SAC is not to be hindered by artificial barriers such as weirs. The characteristic channel morphology provides the diversity of water depths, current velocities and substrate types necessary to fulfil the habitat requirements of the features. The close proximity of different habitats facilitates movement of fish to new preferred habitats with age. 				
River lamprey <i>Lampetra fluviatilis</i>							
Bullhead <i>Cottus gobio</i>							<ul style="list-style-type: none"> Adult densities. Distribution. Reproduction / age Structure.
Otter <i>Lutra lutra</i>		<ul style="list-style-type: none"> Distribution. 	<ul style="list-style-type: none"> The population of otters in the SAC is stable or increasing over the long term and 				

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
		<ul style="list-style-type: none"> Breeding activity. Actual and potential breeding sites. 	<p>reflects the natural carrying capacity of the habitat within the SAC.</p> <ul style="list-style-type: none"> The SAC will have sufficient habitat, including riparian trees and vegetation and wetlands, to support the otter population in the long term. The natural range of otters in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The otter must be able to breed and recruit successfully in the SAC. The size of breeding territories may vary depending on prey abundance. Otter food sources must be sufficient for maintenance of the population. The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat, and underpasses, ledges, fencing etc at road bridges and other artificial barriers. No otter breeding site should be subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance must be managed. 				
Sea lamprey <i>Petromyzon marinus</i>		<ul style="list-style-type: none"> Distribution within catchment. Ammocoete density. 	<ul style="list-style-type: none"> The conservation objective for the watercourse as defined above is met. The population of the feature in the SAC must be stable or increasing over the long term. The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. Passage of the feature through the SAC is not to be hindered by artificial barriers such as weirs. The characteristic channel morphology provides the diversity of water depths, current velocities and substrate types necessary to fulfil the habitat requirements of the features. The close proximity of different habitats facilitates movement of fish to new preferred habitats with age. 				

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 5: PDZ 5 – Pen y Bal to Cardigan

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Afon Teifi/ River Teifi SAC							
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	NA	<ul style="list-style-type: none"> Distribution within catchment Typical species 	<ul style="list-style-type: none"> The capacity of the habitats in the SAC to support each feature at near-natural population levels, as determined by predominantly unmodified ecological and hydromorphological processes and characteristics, should be maintained as far as possible, or restored where necessary. The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity & quality, physical habitat, community composition & structure. It is anticipated that these limits will concur with the relevant standards used by the Review of Consents process Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state, in order to support the coherence of ecosystem structure and function across the whole area of the SAC. All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes cause them to change. Flows, water quality, substrate quality, and quantity at fish spawning sites and nursery areas will not be depleted by abstraction, discharges, engineering or gravel extraction activities or other impacts to the extent that these sites are damaged or destroyed. The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC, including, but not limited to, revetments on active alluvial river banks using stone, concrete or waste materials, unsustainable extraction of gravel, addition or release of excessive quantities of fine sediment, will be avoided. River habitat SSSI features should be in favourable condition. Artificial factors impacting on the capability of each species feature to occupy the full extent of its natural range should be modified where necessary to allow passage, e.g. weirs, bridge sills, acoustic barriers. Natural factors such as waterfalls, which may limit the natural range of a species feature, or dispersal between naturally isolated populations, should not be modified. Flows during the normal migration periods of each migratory fish species feature will not be depleted by abstraction to the extent that passage upstream to spawning sites is hindered. Flow objectives for assessment points in the Teifi Catchment Abstraction Management Strategy (CAMS) as they relate to the Afon Teifi SAC will be agreed between EA and CCW as necessary. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each Water Framework Directive water body in the Afon Teifi SAC, and measures taken to maintain nutrients below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Levels of water quality parameters that are known to affect the distribution and abundance of SAC features will be agreed between EA and CCW for each Water Framework Directive water body in the Afon Teifi SAC, and measures taken to maintain pollution below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process. Levels of suspended solids will be agreed between EA and CCW for each Water Framework Directive water body in the Afon Teifi SAC. Measures including, but not limited to, the control of suspended 	<p><u>Saline intrusion:</u></p> <p>The preferred policy at the inner estuary west (PU 5.4), Bryn-y-mor (PU5.6), Gwbert Cliffs (PU 5.9) and St Dogmaels and Castle Farm (PU 5.10) is NAI which would allow the estuary and the associated sand/mudflats and cliffs to develop naturally and respond to sea level rise.</p> <p>The HTL along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat.</p> <p>A change to the coastal processes and coastal squeeze may result in the extension of saline water into the River Teifi and potentially having an impact on the integrity of the SAC and its typical species.</p> <p>The policies will not effect the saline intrusion as it will occur naturally and not as a result of the SMP2 policies.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
			<p>sediment generated by agriculture, forestry and engineering works, will be taken to maintain suspended solids below these levels.</p> <ul style="list-style-type: none"> Potential sources of pollution not addressed in the Review of Consents, such as contaminated land, will be considered in assessing plans and projects. 				
Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	NA	<ul style="list-style-type: none"> Macrophyte community composition: Llyn Hir Macrophyte community composition: Llyn Teifi, Llyn Egnant, Llyn y Gorlan and Llyn Bach 	<ul style="list-style-type: none"> The conservation objective for the water course above must be met The <i>Littorelletea uniflorae</i> aquatic upland lake community will be present in all five of the Teifi Pools (Llyn Hir, Llyn Teifi, Llyn Egnant, Llyn y Gorlan and Llyn Bach), and will be self-maintaining on a long-term basis. A fully developed <i>Littorelletea</i> community will be present in Llyn Hir, including all of the component species typical of the SAC feature, as represented in the Afon Teifi SAC. The typical species are defined with reference to the species composition of the JNCC standing water type for the SAC feature, unless differing from this type due to natural variability when other typical species may be defined as appropriate. For each of Llyn Teifi, Llyn Egnant, Llyn y Gorlan and Llyn Bach, the extent and species composition of the <i>Littorelletea</i> community will be stable or increasing in range. There will be no deterioration in the conservation status of the feature as represented in these lakes. 	<p>Saline intrusion:</p> <p>Oligotrophic to mesotrophic standing waters which support the Floating water-plantain <i>Luronium natans</i> are not located within the SMP area.</p>	None required	No adverse effect expected	Yes
Brook lamprey <i>Lampetra planeri</i>	<ul style="list-style-type: none"> Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> 	<ul style="list-style-type: none"> Age/size structure of ammocoete population Distribution of ammocoetes within catchment Ammocoete Density 	<ul style="list-style-type: none"> The conservation objective for the water course as defined in 'water courses' above must be met The population of the feature in the SAC is stable or increasing over the long term. The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions e.g. food supply. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. Natural factors such as waterfalls may limit the natural range of individual species. Existing artificial influences on natural range that cause an adverse effect on site integrity, such as physical barriers to migration, will be assessed. There is, and will continue to be, a sufficiently large habitat to maintain the feature's population in the SAC on a long-term basis. 	<p>On the whole, it is unlikely that structure or behaviour of the estuary will be impacted by the SMP policies. The NAI policy at the mouth of the estuary will allow the estuary to function naturally.</p> <p>The HTL policies within the inner estuary apply to areas of natural sea defence and where HTL was the original policy. The HTL policy is alongside existing developed areas and therefore is not likely to result in a barrier to the flow of the river.</p> <p>The SMP policies will not result in obstruction of the water course</p> <p>The MR policies within PUs 5.13 and 5.14 are to allow retreat of defences along the water course, and it is only the management of the habitat on the south side that is to be considered within this assessment, and that it is only the road set back from the river that would be defended along the north side.</p> <p>It is not expected that the SMP policies will cause obstruction to fish migratory routes, or change the conditions within the spawning areas for the qualifying species.</p>	None required	No adverse effect expected	Yes
River lamprey <i>Lampetra fluviatilis</i>	<ul style="list-style-type: none"> Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> 						
Atlantic salmon <i>Salmo salar</i>	<ul style="list-style-type: none"> Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> 	<ul style="list-style-type: none"> Adult run size Juvenile densities 					
Goby <i>Cottus gobio</i>	<ul style="list-style-type: none"> Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 	<ul style="list-style-type: none"> Population densities Distribution Reproduction/ age structure 					
Sea lamprey <i>Petromyzon marinus</i>	<ul style="list-style-type: none"> Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 	<ul style="list-style-type: none"> Distribution within catchment Ammocoete density 					
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Water courses of plain to 	<ul style="list-style-type: none"> Distribution 		<ul style="list-style-type: none"> The population of otters in the SAC is stable or increasing over the long 			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
	montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	<ul style="list-style-type: none"> Breeding activity Actual and potential breeding sites 	<p>term and reflects the natural carrying capacity of the habitat within the SAC, as determined by natural levels of prey abundance and associated territorial behaviour.</p> <ul style="list-style-type: none"> The natural range of otters in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches that are potentially suitable to form part of a breeding territory and/or provide routes between breeding territories. The whole area of the Teifi SAC is considered to form potentially suitable breeding habitat for otters. The size of breeding territories may vary depending on prey abundance. The population size should not be limited by the availability of suitable undisturbed breeding sites. Where these are insufficient they should be created through habitat enhancement and where necessary the provision of artificial holts. No otter breeding site should be subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance must be managed. The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat, and underpasses, ledges, fencing etc at road bridges and other artificial barriers. 	<p>throughout much of its catchment. The river has suitable resting and breeding sites along its length. Evidence from surveys and sightings suggest the tidal reach is being increasingly used by otters.</p> <p>It is unlikely that the SMP policies will have a significant impact on the breeding, feeding and resting sites along the entire catchment area.</p>		expected	
Floating water-plantain <i>Luronium natans</i>	<ul style="list-style-type: none"> Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the Isoëto-Nanojuncetea 	<ul style="list-style-type: none"> Distribution of floating water-plantain in the main river Distribution of floating water-plantain in the Teifi pools Presence of floating flowers in the Teifi pools 	<ul style="list-style-type: none"> The conservation objective for the water course as defined in 'water courses' above must be met. The floating water-plantain populations will be viable throughout their current distribution in the SAC (maintaining themselves on a long-term basis). Each floating water-plantain population must be able to complete sexual and/or vegetative reproduction successfully. Potential for genetic exchange between floating water-plantain populations, in and/or outside the SAC, must be evident in the long-term. Dispersal of floating water-plantain must be unhindered. The SAC will have sufficient suitable habitat to support floating water-plantain populations within their current distribution. There will be no contraction of the current floating water-plantain distribution in the SAC. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. water levels in Teifi Pools, water depth, stability of river flows, stability of bed substrate, ecosystem structure and functions e.g. nutrient levels, and shade. 	<p><u>Saline intrusion:</u></p> <p>Oligotrophic to mesotrophic standing waters which support the Floating water-plantain <i>Luronium natans</i> are not located within the SMP2 area as they are situated upstream. Natural saline intrusion may occur and impact on the floating water plantain, as this may occur as a result of natural processes and not the SMP2 policy, no impact can be concluded.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Cardigan Bay/ Bae Ceredigion SAC							
Sandbanks slightly covered by sea water all the time	NA		<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include;</p> <ul style="list-style-type: none"> • Intertidal bedrock reefs • Intertidal cobble, pebble with Sabellaria alveolata (biogenic) reefs • Subtidal bedrock reefs • Subtidal pebble, cobble and boulder reefs • Sea caves. <p><u>Structure and Function</u> The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include;</p> <ul style="list-style-type: none"> • geology, • sedimentology, • geomorphology, • hydrography and meteorology, • water and sediment chemistry, • biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> • at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. • Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> – at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the feature species populations, – their abundance or range taking into account bioaccumulation and biomagnification. 	<p>NAI policies on the open coast will allow the actively eroding cliffs to continue to erode, supplying sediment to the Subtidal sandbanks and ensuring that the feature is not lost.</p> <p>The HTL policies within the inner harbour will cause habitat loss of the sandbanks, however MR in the long term (PUs 5.13, 5.14, and 5.7) would ensure that coastal squeeze would not be an issue.</p> <p>Therefore, there will be no constraint to Subtidal sandbank expansion as a result of the SMP2 policies.</p>	None required	No adverse effect expected	Yes
Reefs	NA	<ul style="list-style-type: none"> • Range • Structure and Function • Typical Species 	<p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include</p> <ul style="list-style-type: none"> – species richness: – population structure and dynamics, – physiological health, – reproductive capacity – recruitment, – mobility – range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term • the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable condition and is secure in the long term. 	<p><u>Coastal Squeeze / Coastal Processes:</u> The specific locations of the intertidal or subtidal reefs are unknown as the indicative habitat map is still in preparation.</p> <p>NAI policies will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease.</p> <p>The HTL policies are only on the frontages within the estuary and as such would not directly impact on reefs as it is unlikely that reef habitat will occur in the estuary as a result of the high flow rates.</p>	None required	No adverse effect expected	Yes
Submerged or partially submerged sea caves	NA		<p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include</p> <ul style="list-style-type: none"> – species richness: – population structure and dynamics, – physiological health, – reproductive capacity – recruitment, – mobility – range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term • the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable condition and is secure in the long term. 	<p><u>Coastal Squeeze / Coastal Processes:</u> It appears that the submerged or partially submerged sea caves are located on the coast where NAI is the preferred policy, therefore the cliffs can erode naturally in response to sea level rise.</p> <p>If the caves are lost due to the eroding cliffs, this would be as a result of natural processes and not the SMP policies – however, new caves will be created as part of the natural process.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Reefs Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p><u>Populations</u> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements include:</p> <ul style="list-style-type: none"> population size structure, production condition of the species within the site. <p>As part of this objective it should be noted that for bottlenose dolphin and grey seal;</p> <ul style="list-style-type: none"> Contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression For grey seal populations should not be reduced as a consequence of human activity <p><u>Range</u> The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin and grey seal</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered There are appropriate and sufficient food resources within the SAC and beyond The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing <p><u>Supporting Habitats and Species</u> The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution extent structure function and quality of habitat prey availability and quality. <p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour Restoration and recovery. 	<p>The bottlenose dolphin <i>Tursiops truncatus</i> population of Cardigan Bay off the west coast of Wales has been estimated to consist of around 125 individuals. The dolphins appear to use the inshore waters of Cardigan Bay for both feeding and reproduction, and in the summer months calves and juveniles are often observed with adult individuals or groups.</p> <p>The SMP policies would not be expected to have an impact on the integrity of the SAC or the bottlenose dolphin's resident there.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	Yes
Sea lamprey <i>Petromyzon marinus</i>	<ul style="list-style-type: none"> Reefs Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves 						
River lamprey <i>Lampetra fluviatilis</i>	<ul style="list-style-type: none"> Reefs Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves 			<p>On the whole, it is unlikely that structure or behaviour of the estuary will be impacted by the SMP policies. The NAI policy at the mouth of the estuary and up to the boundary of this SAC will allow the estuary to function naturally.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Reefs Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves 		<ul style="list-style-type: none"> As part of this objective it should be noted that for the bottlenose dolphin populations should be increasing. 	<p>Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of haul out sites within the Cardigan Bay SAC over all 3 epochs.</p> <p>HTL (PUs 5.5, 5.7, 5.8, 5.11, and 5.12) may result in loss of intertidal habitat within the estuary, however, as this is a populated area, it is unlikely that it will be used by seals as haul out sites. In addition the seals food resource is unlikely to be affected as the estuary itself will not be reduced by the preferred policies, therefore the extent of feeding resource available to the seals will consequently not be reduced.</p> <p>Grey seals may occur along discreet areas of coastline within PDZ 5. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes under the NAI policy, therefore not impacting on the seal haul out sites.</p>	None required	No adverse effect expected	Yes

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 6: PDZ 6 – Pencribach to New Quay Head

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Cardigan Bay/ Bae Ceredigion SAC							
Sandbanks slightly covered by sea water all the time	NA		<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include;</p> <ul style="list-style-type: none"> • Intertidal bedrock reefs • Intertidal cobble, pebble with Sabellaria alveolata (biogenic) reefs • Subtidal bedrock reefs • Subtidal pebble, cobble and boulder reefs • Sea caves <p><u>Structure and Function</u> The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include;</p> <ul style="list-style-type: none"> • geology, • sedimentology, • geomorphology, • hydrography and meteorology, • water and sediment chemistry, • biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> • at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. • Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> – at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the feature species populations, – their abundance or range taking into account bioaccumulation and biomagnification. <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include</p> <ul style="list-style-type: none"> – species richness: – population structure and dynamics, – physiological health, – reproductive capacity – recruitment, – mobility – range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term • the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable condition and is secure in the long term. 	<p><u>Coastal Squeeze/ Coastal Processes:</u> The specific locations of the sandbanks are unknown as the indicative habitat map is still in preparation. However, the extent of subtidal sandbanks would not decrease as a result of the HTL policies and they are likely to develop over existing intertidal habitat. No impact will occur to the subtidal sandbanks as any management occurs to local areas behind beaches and will no have an impact on a large scale of the coastal processes.</p>	None required	No adverse effect expected	Yes
Reefs	NA	<ul style="list-style-type: none"> • Range • Structure and Function • Typical Species 	<p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> • at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. • Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> – at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the feature species populations, – their abundance or range taking into account bioaccumulation and biomagnification. <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include</p> <ul style="list-style-type: none"> – species richness: – population structure and dynamics, – physiological health, – reproductive capacity – recruitment, – mobility – range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term • the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable condition and is secure in the long term. 	<p><u>Coastal Squeeze/ Coastal Processes:</u> The specific locations of the intertidal or subtidal reefs are unknown as the indicative habitat map is still in preparation. NAI along the majority of the coastline will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. No impact will occur to the reefs as any management occurs to local areas behind beaches and will no have an impact on a large scale of the coastal processes.</p>	None required	No adverse effect expected	Yes
Submerged or partially submerged sea caves	NA		<p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include</p> <ul style="list-style-type: none"> – species richness: – population structure and dynamics, – physiological health, – reproductive capacity – recruitment, – mobility – range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term • the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable condition and is secure in the long term. 	<p><u>Coastal Squeeze/ Coastal Processes:</u> The submerged or partially submerged sea caves are located on the coast where NAI is the preferred policy, therefore the cliffs can erode naturally in response to sea level rise. If the caves are lost due to the eroding cliffs, this would be as a result of natural processes and not the SMP policies – however, new caves will be created as part of the natural process. It is estimated that 2ha of habitat will be lost along the coast of PDZ 6 (which mainly comprises cliffs) in epoch 1; 4ha in epoch 2; and 21ha in epoch 3. No impact will occur to the submerged or partially submerged sea caves as management only occurs to local areas behind beaches as opposed to coastal cliffs, and will have no impact on large scale or no noticeable impact on local scale coastal processes.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 		<p><u>Populations</u> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements include:</p> <ul style="list-style-type: none"> population size structure, production condition of the species within the site. <p>As part of this objective it should be noted that for bottlenose dolphin and grey seal;</p> <ul style="list-style-type: none"> Contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression For grey seal populations should not be reduced as a consequence of human activity 	<p>The bottlenose dolphin <i>Tursiops truncatus</i> population of Cardigan Bay off the west coast of Wales has been estimated to consist of around 125 individuals. The dolphins appear to use the inshore waters of Cardigan Bay for both feeding and reproduction, and in the summer months calves and juveniles are often observed with adult individuals or groups.</p> <p>The SMP policies would not be expected to have an impact on the integrity of the SAC or the bottlenose dolphin's resident there.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	Yes
Sea lamprey <i>Petromyzon marinus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 		<p><u>Range</u> The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin and grey seal</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered There are appropriate and sufficient food resources within the SAC and beyond The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing 	<p>The estuarine feature which would support the Sea and River Lamprey are not located within PDZ 6.</p>	None required	No adverse effect expected	Yes
River lamprey <i>Lampetra fluviatilis</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p><u>Supporting Habitats and Species</u> The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution extent structure function and quality of habitat prey availability and quality. <p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin populations should be increasing. 				
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 		<p><u>Coastal Squeeze/ Coastal Processes:</u> Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of haul out sites within the Cardigan Bay SAC over all 3 epochs.</p> <p>Significant coastal squeeze and loss of beach habitat may be observed at Aberporth (PU 6.2) over all 3 epochs as a result of the HTL policy and at Llangrannog (PU 6.6) as a result of HTL and MR (increased protection). Coastal squeeze and loss of beach habitat will be minimal at Tresaith in epoch 1 as a result of HTL – however, MR in epochs 2 and 3 will allow the beach to retreat, therefore potentially alleviating the coastal squeeze in the long term.</p> <p>Grey seals may occur along discreet areas of coastline within PDZ 6. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p>	<p><u>Coastal Squeeze/ Coastal Processes:</u> Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of haul out sites within the Cardigan Bay SAC over all 3 epochs.</p> <p>Significant coastal squeeze and loss of beach habitat may be observed at Aberporth (PU 6.2) over all 3 epochs as a result of the HTL policy and at Llangrannog (PU 6.6) as a result of HTL and MR (increased protection). Coastal squeeze and loss of beach habitat will be minimal at Tresaith in epoch 1 as a result of HTL – however, MR in epochs 2 and 3 will allow the beach to retreat, therefore potentially alleviating the coastal squeeze in the long term.</p> <p>Grey seals may occur along discreet areas of coastline within PDZ 6. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p>	None required	No adverse effect expected	Yes

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 7: PDZ 7 – New Quay Head to Llanina Point

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Cardigan Bay/ Bae Ceredigion SAC							
Sandbanks slightly covered by sea water all the time	NA	<ul style="list-style-type: none"> Range Structure and Function Typical Species 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include;</p> <ul style="list-style-type: none"> Intertidal bedrock reefs Intertidal cobble, pebble with Sabellaria alveolata (biogenic) reefs Subtidal bedrock reefs Subtidal pebble, cobble and boulder reefs Sea caves <p><u>Structure and Function</u> The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include;</p> <ul style="list-style-type: none"> geology, sedimentology, geomorphology, hydrography and meteorology, water and sediment chemistry, biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the feature species populations, their abundance or range taking into account bioaccumulation and biomagnification. <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include</p> <ul style="list-style-type: none"> species richness: population structure and dynamics, physiological health, reproductive capacity recruitment, mobility range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable 	<p><u>Coastal Squeeze / Coastal Processes:</u> The specific locations of the sandbanks are unknown as the indicative habitat map is still in preparation.</p> <p>However, as HTL policies within PDZ 7 are located along existing hard cliff or set back behind the beach, it is unlikely that coastal processes of direct disturbance to subtidal sandbanks would occur.</p>	None required	No adverse effect expected	Yes
Reefs	NA			<p><u>Coastal Squeeze / Coastal Processes:</u> The specific locations of the intertidal or subtidal reefs are unknown as the indicative habitat map is still in preparation.</p> <p>However, as HTL policies within PDZ 7 are located along existing hard cliff or set back behind the beach, it is unlikely that coastal processes of direct disturbance to subtidal reefs would occur.</p> <p>NAI policies and MR to a degree will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease.</p> <p>A HTL will cause habitat loss of the rocky intertidal in the long term as sea levels rise and the shore is squeezed, under such conditions the area of subtidal reefs would increase in extent. Therefore, there is likely to be an adverse effect on the integrity of the SAC. However, the only place where this is likely is within the harbour where the walls will not affect the reefs as they themselves will probably form artificial reefs. In addition, there will be no impact to the beach fronts as a result of a change in coastal processes as the defences are located on land or the upper intertidal zone. MR in the long term would ensure that coastal squeeze would not be an issue.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Submerged or partially submerged sea caves	NA		condition and is secure in the long term.	<p><u>Coastal Squeeze/ Coastal Processes:</u> It appears that the submerged or partially submerged sea caves are located on the coast where NAI is the preferred policy in an area of intertidal rocky shore and low cliffs; therefore the cliffs and rocky shore can erode naturally in response to sea level rise potentially resulting in a loss of cave habitat – however, new caves will be created as part of the natural process.</p> <p>The coastline with the most potential for sea caves is located within PUs 7.1; and 7.6, where the preferred policy is MR (managed retreat of the cliffs) and NAI (natural retreat of the cliffs), respectively.</p>	None required	No adverse effect expected	Yes
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p><u>Populations</u> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements include:</p> <ul style="list-style-type: none"> population size structure, production condition of the species within the site. <p>As part of this objective it should be noted that for bottlenose dolphin and grey seal;</p> <ul style="list-style-type: none"> Contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression For grey seal populations should not be reduced as a consequence of human activity <p><u>Range</u> The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin and grey seal</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered There are appropriate and sufficient food resources within the SAC and beyond The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing <p><u>Supporting Habitats and Species</u> The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution extent structure function and quality of habitat 	<p>The bottlenose dolphin <i>Tursiops truncatus</i> population of Cardigan Bay off the west coast of Wales has been estimated to consist of around 125 individuals. The dolphins appear to use the inshore waters of Cardigan Bay for both feeding and reproduction, and in the summer months calves and juveniles are often observed with adult individuals or groups.</p> <p>The SMP policies would not be expected to have an impact on the integrity of the SAC or the bottlenose dolphin's resident there.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	Yes
Sea lamprey <i>Petromyzon marinus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 						Yes
River lamprey <i>Lampetra fluviatilis</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 			The estuarine feature which would support the Sea and River Lamprey are not located within PDZ 7.	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 		<ul style="list-style-type: none"> prey availability and quality. <p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin populations should be increasing. 	<p><u>Coastal Squeeze/ Coastal processes:</u></p> <p>Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of haul out sites within the Cardigan Bay SAC over all 3 epochs.</p> <p>Grey seals may occur along discreet areas of coastline within PDZ 7. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p> <p>The area where coastal squeeze will most likely occur as a result of HTL is located in front of populated areas, which are not considered to be important seal haul out sites.</p>	None required	No adverse effect expected	Yes

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 8: PDZ 8 – Gilfach to Llanrhystud

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Cardigan Bay/ Bae Ceredigion SAC							
Sandbanks slightly covered by sea water all the time	NA		<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include;</p> <ul style="list-style-type: none"> • Intertidal bedrock reefs • Intertidal cobble, pebble with Sabellaria alveolata (biogenic) reefs • Subtidal bedrock reefs • Subtidal pebble, cobble and boulder reefs • Sea caves 	<p><u>Coastal Squeeze / Coastal Processes:</u> The specific locations of the sandbanks are unknown as the indicative habitat map is still in preparation. However, the extent of Subtidal sandbanks would not actually decrease as a result of the HTL policies and they are likely to increase as the intertidal habitat is lost.</p>	None required	No adverse effect expected	Yes
Reefs	NA	<ul style="list-style-type: none"> • Range • Structure and Function • Typical Species 	<p><u>Structure and Function</u> The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include;</p> <ul style="list-style-type: none"> • geology, • sedimentology, • geomorphology, • hydrography and meteorology, • water and sediment chemistry, • biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> • at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. • Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> – at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the feature species populations, – their abundance or range taking into account bioaccumulation and biomagnification. 	<p><u>Coastal Squeeze / Coastal Processes:</u> The specific locations of the intertidal or subtidal reefs are unknown as the indicative habitat map is still in preparation. NAI policies will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. A HTL policy will cause habitat loss of the rocky intertidal in the long term as sea levels rise and the shore is squeezed, MR in the long term would ensure that coastal squeeze would not be an issue. The reefs within the Cardigan Bay SAC are located in the west and south of the area. As PDZ 8 is located in the north of the SAC and only encompasses PUs 8.1 to 8.6 it is considered unlikely that reefs will occur in the area; and will not be impacted by the SMP2 policies.</p>	None required	No adverse effect expected	Yes
Submerged or partially submerged sea caves	NA		<p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include</p> <ul style="list-style-type: none"> – species richness: – population structure and dynamics, – physiological health, – reproductive capacity – recruitment, – mobility – range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term • the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable condition and is secure in the long term. 	<p><u>Coastal Squeeze / Coastal Processes:</u> It appears that the submerged or partially submerged sea caves are located on the coast where NAI is the preferred policy; therefore the cliffs can erode naturally in response to sea level rise potentially resulting in a loss of cave habitat – however, new caves will be created as part of the natural process. The coastline with the most potential for sea caves is located within PUs 8.1 and 8.5, where the preferred policy is DN (Do Nothing) and NAI (natural retreat of the cliffs). Within these 2 PUs, the only significant loss that will occur is within PU 8.1, with a total loss of 4 ha of habitat will occur over the 3 epochs. However, given the DN policy, this loss will occur naturally and not as a result of the SMP.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 		<p><u>Populations</u></p> <p>The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements include:</p> <ul style="list-style-type: none"> population size structure, production condition of the species within the site. <p>As part of this objective it should be noted that for bottlenose dolphin and grey seal;</p> <ul style="list-style-type: none"> Contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression For grey seal populations should not be reduced as a consequence of human activity <p><u>Range</u></p> <p>The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin and grey seal</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered There are appropriate and sufficient food resources within the SAC and beyond The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing <p><u>Supporting Habitats and Species</u></p> <p>The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution extent structure function and quality of habitat prey availability and quality. <p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin populations should be increasing. 	<p>The bottlenose dolphin <i>Tursiops truncatus</i> population of Cardigan Bay off the west coast of Wales has been estimated to consist of around 125 individuals. The dolphins appear to use the inshore waters of Cardigan Bay for both feeding and reproduction, and in the summer months calves and juveniles are often observed with adult individuals or groups.</p> <p>The SMP policies would not be expected to have an impact on the integrity of the SAC or the bottlenose dolphin's resident there.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	Yes
Sea lamprey <i>Petromyzon marinus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 			None Required	No adverse effect expected	Yes
River lamprey <i>Lampetra fluviatilis</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 						
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water all the time Submerged or partially submerged sea caves Reefs 			<p>Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of the single beach within the Cardigan Bay SAC over all 3 epochs within PDZ8. It is unlikely that seals will haul out on the shingle beaches along the coastline of PDZ8.</p> <p>Grey seals may occur along discreet areas of coastline within PDZ 8. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites. In addition, The area where coastal squeeze will most likely occur as a result of HTL is located in front of populated areas, which are not considered to be important seal haul out sites.</p>	None required	No adverse effect expected	Yes

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 9: PDZ 9 – Carreg to Sarn Gynfelyn

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Lleyn Peninsula and the Sarnau (Pen Llyn a'r Sarnau) SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> Range Structure and Function 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include:</p> <ul style="list-style-type: none"> Rocky intertidal reefs. Rocky subtidal reefs. Extensive boulder and cobble reefs – the sarnau. Biogenic reefs (horse mussel <i>Modiolus modiolus</i> reef / green crenella <i>Musculus discors</i> reef and Honeycomb worm <i>Sabellaria alveolata</i> reef. Carbonate reef formed by methane gas leaking from the seabed. 	The Lleyn Peninsula and the Sarnau SAC is partially located within the north section of PDZ9 (PU 9.11, 9.12 and 9.13) – the sandbanks associated with this SAC are not located within these policy units and are therefore unlikely to be impacted by preferred policy options.	None required	No adverse effect expected	Yes
Estuaries	NA		<p>For the intertidal mudflat and sandflat feature these include:</p> <ul style="list-style-type: none"> <i>Mya arenaria</i> and polychaetes in muddy gravel. Eel grass <i>Zostera marina</i> beds. Muddy gullies in the Mawddach estuary. <p>For the Salicornia feature this includes:</p> <ul style="list-style-type: none"> Communities characterised by the species <i>Sarcocornia perennis</i>. For the intertidal mudflats and sandflats and sandbanks features this requires an overall stability or increase in the amount of the feature, taking into account the areas of long term stability and localised losses and additions arising from environmental processes. For estuaries this includes the stability of sandy sediments in proportion to the muddy sediments. Restoration and recovery As part of this objective it should be noted that; for the estuaries feature additional land which should form an integral part of the estuarine ecosystem should be restored. 	<p>The Lleyn Peninsula and the Sarnau SAC is partially located within the north section of PDZ9 (PU 9.11, 9.12 and 9.13)</p> <p>No estuaries are present within the Policy Units of PDZ 9 within the SAC.</p>	None required	No adverse effect expected	Yes
Coastal lagoons (Priority Feature)	NA		<p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include:</p> <ul style="list-style-type: none"> geology sedimentology geomorphology hydrography and meteorology water and sediment chemistry biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from humanactivity to be: <ul style="list-style-type: none"> at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant 	<p>The Lleyn Peninsula and the Sarnau SAC is partially located within the north section of PDZ9 (PU 9.11, 9.12 and 9.13)</p> <p>The coastal lagoon (Morfa Gwylt) which is a priority feature of this SAC is located approximately 20km to the north of the nearest PDZ 9 PU, therefore the policy options planned within PDZ 9 are not expected to have an impact on the integrity of the SAC feature.</p>	None required	No adverse effect expected	Yes
Large shallow inlets and bays	NA		<p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include:</p> <ul style="list-style-type: none"> geology sedimentology geomorphology hydrography and meteorology water and sediment chemistry biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from humanactivity to be: <ul style="list-style-type: none"> at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant 	<p>The Lleyn Peninsula and the Sarnau SAC is partially located within the north section of PDZ9 (PU 9.11, 9.12 and 9.13)</p> <p>Tremadog Bay is located more than 60km from the nearest PDZ 9 policy unit.</p> <p>HTL, MR and ATL policies within PDZ 9 may alter the coastal processes of the area and result in coastal squeeze (and loss of habitat) – however, due to the distance between the nearest policy unit and this feature, it is not expected that the management option will have an impact on the integrity of this feature.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Reefs	NA		<p>concentrations within sediments or biota</p> <p>– below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range.</p> <ul style="list-style-type: none"> • For Atlantic saltmeadows this includes the morphology of the saltmarsh creeks and pans. • Restoration and recovery. • As part of this objective it should be noted that; for the estuaries feature the structure and functions of the estuaries that have been damaged/degraded by the constraints of artificial structures such as flood banks, are restored. <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> • species richness • population structure and dynamics • physiological health • reproductive capacity • recruitment • mobility • range. <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. • the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. • Restoration and recovery • As part of this objective it should be noted that; for the reefs feature the potential for expansion of the horse mussel <i>Modiolus modiolus</i> community off the north Llŷn coast is not inhibited. 	<p>Small areas of intertidal and subtidal reefs occur within PUs 9.11, 9.12 and 9.13.</p> <p>NAI and MR (managed retreat) policies will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease.</p>	None required	No adverse effect expected	Yes
Mudflats and sandflats not covered by sea water at low tide	NA			<p>Only PUs 9.11, 9.12 and 9.13 are located within this SAC.</p> <p>The preferred policy of MR at Clarach Bay (9.11) will involve retreating the central part of the bay over the 3 epochs.</p> <p>Retreating the current breakwater would allow for the beach area to widen and would possibly allow for decrease in the loss of mudflat and sandflat habitat in the short to medium term.</p> <p>The NAI policy in PU 9.12 and 9.13 will allow the mud and sand flats to respond naturally to sea level rise and any loss of habitat will occur a response to natural processes and not the SMP.</p> <p>A total of 0.4ha of coastal/intertidal habitat will be lost in epochs 1 and 2; and 1.3ha lost in epoch 3. However, the majority of the coastline within these PUs comprises shingle beaches and cliffs, therefore the loss of mud and sandflats and colonising annuals will be significantly less than these estimates suggest – therefore it can be concluded that there will be no significant impact is expected.</p>	None required	No adverse effect expected	Yes
<i>Salicornia</i> and other annuals colonising mud and sand	NA			<p>Not present in PDZ 9</p>	None required	No adverse effect expected	Yes
Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>)	NA			<p>The coastline with the most potential for sea caves is located within PU 9.1, 9.10, 9.12 and 9.13, where the preferred policy is NAI. The cliffs will be able to erode naturally of the 3 epochs</p> <p>If the caves are lost due to the eroding cliffs, this would be as a result of natural processes and not the SMP policies – however, new caves will be created as a result of the natural process.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 		<p><u>Populations</u> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that :</p> <ul style="list-style-type: none"> for bottlenose dolphin, otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression grey seal populations should not be reduced as a consequence of human activity 	<p>The Lleyn Peninsula and the Sarnau SAC is partially located within the north section of PDZ9 (PU 9.11, 9.12 and 9.13).</p> <p>No estuaries are present within the Policy Units of PDZ 9 within the SAC and Tremadog Bay is located more than 60km from the nearest PDZ 9 policy unit.</p>			Yes
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 		<p><u>Range</u> The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin, otter and grey seal:</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered There are appropriate and sufficient food resources within the SAC and beyond The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing 	<p>The estuarine features that would support the otter community within this SAC are not located in PDZ 9.</p> <p>The MR policy within the Site boundary will not reduce the supporting habitats of these qualifying species.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p><u>SUPPORTING HABITATS AND SPECIES</u> The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution, extent, structure, function and quality of habitat, prey availability and quality. <p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. 	<p>Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of haul out sites within the Lleyn Peninsula and the Sarnau SAC SAC over all 3 epochs.</p> <p>Haul out sites for grey seals are located within this SAC and in particular are located to the south of the Dyfi Estuary on the open coast of PDZ 10, although the coastline to the North end of PDZ may support grey seal populations.</p> <p>However, the policies along the coast north of Glarach are NAI and hence natural processes of erosion and accretion would occur in response to sea level rise. Seal haul out sites are therefore expected to remain, whilst there would be no change in the supporting habitats in terms of reduction.</p>	None required	No adverse effect expected	Yes

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 10: PDZ 10 – Upper Borth to Tonfanau

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pen Llyn a'r Sarnau/ Lleyen Peninsula and the Sarnau SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> Range Structure and Function 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include:</p> <ul style="list-style-type: none"> Rocky intertidal reefs. Rocky subtidal reefs. Extensive boulder and cobble reefs – the sarnau. Biogenic reefs (horse mussel <i>Modiolus modiolus</i> reef / green crenella <i>Musculus discors</i> reef and Honeycomb worm <i>Sabellaria alveolata</i> reef. Carbonate reef formed by methane gas leaking from the seabed. <p>For the intertidal mudflat and sandflat feature these include:</p> <ul style="list-style-type: none"> Mya arenaria and polychaetes in muddy gravel. Eel grass <i>Zostera marina</i> beds. Muddy gullies in the Mawddach estuary. <p>For the <i>Salicornia</i> feature this includes:</p> <ul style="list-style-type: none"> Communities characterised by the species <i>Sarcocornia perennis</i>. For the intertidal mudflats and sandflats and sandbanks features this requires an overall stability or increase in the amount of the feature, taking into account the areas of long term stability and localised losses and additions arising from environmental processes. For estuaries this includes the stability of sandy sediments in proportion to the muddy sediments. Restoration and recovery. As part of this objective it should be noted that; for the estuaries feature additional land which should form an integral part of the estuarine ecosystem should be restored. <p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include:</p> <ul style="list-style-type: none"> Geology, Sedimentology, geomorphology, hydrography and meteorology, water and sediment chemistry, biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. below levels that would potentially result in increase in contaminant concentrations within sediments or biota. below levels potentially detrimental to the long-term maintenance of 	<p>Not present in PDZ 10.</p> <p><u>Coastal Squeeze / Coastal Processes:</u> Pen Llyn a'r Sarnau has representative examples of bar-built estuaries in north-west Wales, and includes the Glaslyn/Dwryd (PDZ 12), Mawddach (PDZ 11) and Dyfi estuaries (PDZ 10). There is a continuous gradient between the clean sands near the entrance to the sea and the mud or muddy sands in the sheltered extremes of the estuaries. The intertidal sandflats support communities of burrowing invertebrates, including dense populations of polychaete worms, crustaceans, bivalve molluscs and gastropod molluscs. Saltmarsh fringing the shores of the estuaries, and the saltmarsh creeks and pools, are important habitat features for juvenile fish.</p> <p>Within the inner and outer estuary, the preferred policies are for HTL and MR. It is likely that there will be a loss of sandflat habitat within the estuary as the defences are maintained over Epochs 1 and 2 for PU 10.5, 10.6, and 10.7, and for all epochs in PU 10.8, 10.11, 10.12, 10.13. Under the HTL policies for these units, the defence to the south and north side of the estuary would be continued for those PUs listed above. This continues to constrain the way in which the estuary behaves and could result in a smaller ebb delta system which would then impose greater pressure on the dunes to the west of Aberdyfi. This may result in the long term in loss of important habitat (although not a qualifying feature).</p> <p>Although the area of estuary habitat would not be reduced, the structure (type and function) and range of intertidal habitats would be expected to reduce in Epochs 1 and 2, albeit offset by MR policy for PU 10.14 commencing in epoch 1. In addition, MR policies in PU 10.9 (in epoch 2) and PU 10.10 (in epoch 1) would also allow for development of estuarine intertidal habitats which would increase in size in epochs 2 and 3. The policy of MR in epoch 3 for PU 10.5, 10.6, 10.7 would then be expected to significantly increase the area of both estuary and intertidal habitats within epoch 3.</p> <p>Overall, the function, range and structure of the estuary habitats will remain in balance and favourable condition, and no adverse effect is expected.</p>	<p>None Required</p> <p>None Identified</p>	<p>No adverse effect expected</p> <p>No adverse effect expected (adverse effect to the estuarine intertidal habitat, not the estuary itself)</p>	<p>Yes</p> <p>Yes</p>
Estuaries	NA						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Coastal lagoons (Priority Feature)	NA		<p>the features species populations, their abundance or range.</p> <ul style="list-style-type: none"> For Atlantic saltmeadows this includes the morphology of the saltmarsh creeks and pans Restoration and recovery. <p>As part of this objective it should be noted that; for the estuaries feature the structure and functions of the estuaries that have been damaged/degraded by the constraints of artificial structures such as flood banks, are restored.</p> <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> species richness, population structure and dynamics, physiological health, reproductive capacity, recruitment, mobility, range. <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Restoration and recovery. <p>As part of this objective it should be noted that; for the reefs feature the potential for expansion of the horse mussel <i>Modiolus modiolus</i> community off the north Llŷn coast is not inhibited.</p>	<p><u>Saline intrusion:</u></p> <p>Morfa Gwylt lagoon is a small percolation lagoon that consists of a depression in a shingle bar across the mouth of the Afon Dysynni in mid Wales. This is the only example of a percolation lagoon in Wales. The substrate is a mosaic of medium sand over/amongst shingle, with muddier patches within the deeper pockets, and scattered larger pebbles. Three lagoonal specialists have been found at this site: the amphipod <i>Sphaeroma hookeri</i>, the bryozoan <i>Conopeum seurati</i> and the alga <i>Chaetomorpha linum</i>.</p> <p>The mouth of the Afon Dysynni is located within the constraints of PU 10.18, where the preferred policy option is HTL in epoch 1 and MR in epochs 2 and 3.</p> <p>With sea level rise, the plateau would flood, significantly increasing the potential tidal prism. If the shoreline barrier were allowed to breach then it is possible that a new active estuary mouth would develop. If the entrance channel remains fixed to the north, the increased flow will attempt to widen and deepen the channel.</p> <p>It is probable that recharge would be required to maintain both the railway defence and the northern bay. In taking this approach still further, consideration could be given to creating a new cut through to the Dysynni, developing a more functional estuary mouth.</p> <p>The potential benefits of this are in using the Dysynni and its ebb shingle banks as part of the defence system. However, in taking this approach there is potential to incorporate better defence to the lagoon.</p> <p>Within the Dysynni, the plan intent would be for MR of defences. This would need to be developed with local land owners.</p> <p>The overall potential impact to the lagoon is that it is lost as the estuary becomes a more naturally functioning estuary system, or the shingle bank is breached as a result of sea level rise.</p> <p>The coastal lagoon will remain, and the function will remain the same, though the location and extent may change and adapt over time with the transient nature of this feature.</p>	Unless the SMP policy is constraining the estuary further then it will continue to function as it is at present.	No adverse effect expected	Yes
Large shallow inlets and bays	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>No 'large shallow inlets and bays' as a feature of this SAC are present in PDZ 10. The closest is Tremadog Bay located in PDZ 12 to the north.</p>	None Required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Reefs	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Areas of subtidal reefs are located at either end of PDZ 10.</p> <p>NAI policies will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease.</p> <p>The subtidal reefs within PDZ 10 comprise bedrock reef (biogenic reefs located in PDZ 13 to the north west). The HTL policies are located along the soft shoreline within PDZ 10 therefore continued movement of materials will occur and there will no impact on the reefs in terms of a reduction in their extent.</p>	None required	No adverse effect expected	Yes
Mudflats and sandflats not covered by sea water at low tide	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>The majority of the open coastline within PDZ 10; and much of the Dyfi estuary consists of sandflats from PU 10.2 to PU 10.19.</p> <p>Of these sandflats – those present in PU 10.2, 10.16 and part of 10.15 and 10.17 are not part of the SAC.</p> <p><i>Dyfi Estuary</i></p> <p>Sandflats within the Dyfi Estuary are generally subject to a preferred option of HTL with some areas of MR.</p> <p>Within the inner and outer estuary, the preferred policies are for HTL and MR. It is likely that there will be a loss of sandflat habitat within the estuary as the defences are maintained over epoch 1 for PUs 10.6, 10.7, 10.8, 10.11, 10.12, and 10.13, and in epoch 2 for PUs 10.6, 10.7, 10.8, 10.11, and 10.12, and during epoch 3 for PUs 10.8, 10.11, 10.12, and 10.13. Under the HTL policies for these units, the defence to the south and north side of the estuary would be continued for those PUs listed above.</p> <p>The policy for the sand dunes at the mouth of the estuary (PU 10.4) will be a managed retreat to ensure that they remain a robust defence from the open coast.</p> <p>The intertidal sandflat habitat within the estuary that would be lost is 4.3ha (though no loss in PUs 10.8, 10.12, and 10.13) in epoch 1; 239.88ha in epoch 2; and 111.33ha in epoch 3 (though no loss in PU 10.8).</p> <p><i>Open Coastline</i></p> <p>The generally preferred policy options along much of the coastline is for HTL or MR over all 3 epochs – with maintaining the existing defences being the priority, with beach recharge identified at Borth and at Tywyn in epochs 2 and 3.</p> <p>The HTL policy would result in coastal squeeze and a loss of intertidal sandflat, where these are present seaward of existing defences within the</p>	Potentially move defences landward were feasible to allow mudflats to roll back in time with sea level rise.	Loss of intertidal habitat within the estuary and on the open coast will result in an adverse effect to the integrity of this SAC feature.	No
<i>Salicornia</i> and other annuals colonising mud and sand	NA						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
				<p>SAC, such as at PU 10.3, 10.17 (part), and 10.18 (part).</p> <p>To the North at Tywyn (PU 10.16) the HTL policy will lead to erosion at the base of the defence and a change to the coastal processes to the north of the defence. Though these intertidal habitats are not located within the SAC boundary.</p> <p>North of the dunes the policy is also for retreat PU 10.14 and 10.15 however there is concern that within the MR policy planned drainage may become an issue over the main marsh area with sea level rise. MR will allow for natural succession and development within the dunes and the intertidal shoreline, therefore it can be concluded that there will be no adverse impact.</p> <p>The outer estuary and open coastline within the Site boundary (PUs 10.3, 10.17, and 10.18) will experience habitat loss over the 3 epochs. In epoch 1 a loss of up to 0.76ha of intertidal sandflat could occur in PUs 10.3 and 10.17; in epoch 2 a loss of up to 6.39ha of intertidal sandflat could occur as a result of HTL for PU 10.17, and in epoch 3 a loss of up to 1.59ha of intertidal sandflat could occur as a result of HTL for PU 10.17.</p> <p>A total of 364.25ha of intertidal sandflat could be lost over the next 100 years as a result of the HTL policies within this PDZ).</p>			
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Saltmarshes have been identified within the Dyfi Estuary (primarily PU 10.6) and are an important habitat for the SAC, SPA and Ramsar sites. Within this PU, there is a preferred policy of HTL/HTL/MR.</p> <p>The HTL policies would result in coastal squeeze as a result of sea level rise and a loss of intertidal habitat. The reduced area of intertidal habitat would also result in a reduction in the area of appropriate habitat for saltmarsh as the intertidal sandflats roll back into the saltmarsh habitat, particularly during epoch 2. Of the intertidal habitat lost as a result of HTL policy for PU 10.6 in epoch 1 1.84ha of saltmarsh habitat could be lost, and in epoch 2 up to 120.16ha of saltmarsh habitat could be lost due to constraint resulting from HTL. Potentially saltmarsh would develop in other areas of the estuary as MR policies are implemented in epochs 1 and 2, or even further upstream; however, the loss within the Site boundary could occur. Given that there is no detailed modelling (as this a strategic level assessment) based on the worst case and using the precautionary principle, these potential extents could be lost. Further study may identify a reduced extent of loss.</p>	Note: within the estuary the HTL policy is principally to the hard rock shoreline to the north where defence is constructed to hard rock. The MR policy is effectively removing the main line of defence with local management of the habitat development and the potential for local management of flood risk to properties. However, HTL in epoch 2 could result in potentially significant loss unless other areas are created.	Given the extent of loss of this feature an adverse effect could occur	No
Submerged or partially submerged sea caves	NA			Not within PDZ 10.	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 		<p><u>Populations</u></p> <p>The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> for bottlenose dolphin, otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression. grey seal populations should not be reduced as a consequence of human activity. <p>Range</p> <p>The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin, otter and grey seal:</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered. There are appropriate and sufficient food resources within the SAC and beyond. The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing. <p>SUPPORTING HABITATS AND SPECIES</p> <p>The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution, extent, structure, function and quality of habitat, prey availability and quality. 	<p>The SMP policies would not be expected to have an impact on the integrity of the SAC or the bottlenose dolphin's resident there.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	Yes
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Estuaries Mudflats and sandflats not covered by sea water at low tide 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery. As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Overall, the area of estuary will not be reduced as a result of the SMP2 policies; therefore maintaining the otters food resources. However, there will be a loss of intertidal habitat within the estuary.</p> <p>Within the inner and outer estuary, the preferred policies are for HTL and MR. It is likely that there will be a loss of sandflat habitat within the estuary as the defences are maintained over Epochs 1 and 2 for PU 10.5, 10.6, and 10.7, and for all epochs in PU 10.8, 10.11, 10.12, 10.13. Under the HTL policies for these units, the defence to the south and north side of the estuary would be continued for those PUs listed above.</p> <p>MR upstream within the estuary (PU 10.10) will provide additional intertidal/estuary habitat in the longer term.</p> <p>Otters may occur along discreet areas of coastline within PDZ 10 and within the estuary. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, and the available estuarine feeding habitat will not be affected by the SMP policies.</p>	None required	No adverse effect expected	Yes
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Mudflats and sandflats not covered by sea water at low tide 		<p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery. As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. 	<p>Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Overall, the area of estuary will not be reduced as a result of the SMP2 policies; therefore maintaining the seals food resources.</p> <p>Erosion may occur to haul out site locations where they are in the intertidal area and coastal squeeze may result in a general loss of haul out sites within the Lleyn Peninsula and the Sarnau SAC SAC over all 3 epochs, however this will likely result in an alteration in the extent of haul out sites and not to the characteristics of the sites (e.g. disturbance etc). Therefore no adverse impact is expected.</p> <p>Haul out sites for grey seals are located within this SAC and in particular are located to the south of the Dyfi Estuary on the open coast of PDZ 10.</p>	None Required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Cors Fochno SAC							
Active raised bogs	NA	<ul style="list-style-type: none"> Extent of active raised bog Condition of active raised bog 	<ul style="list-style-type: none"> NVC type M18 <i>Sphagnum papillosum</i>-<i>Erica tetralix</i> raised mire and M2 <i>Sphagnum cuspidatum</i> bog pool communities will occupy > 95% of the 'primary' (i.e. uncut) bog area. The cover level of characteristic bog mosses (<i>Sphagnum</i> species) will be sufficiently high (>25%) to indicate healthy peat growth. 'Hummock and hollow' patterning will be present across the centre of the bog dome. The hollows (i.e. <i>Rhynchosporion</i> depressions) will usually have greater sundew <i>Drosera anglica</i> present and will be increasing or maintaining their extent. The following species will be common in the active raised bog: <i>Sphagnum capillifolium</i>, <i>S. papillosum</i> and <i>S. magellanicum</i>, bog rosemary <i>Andromeda polifolia</i> and white-beak sedge <i>Rhynchospora alba</i>. The rare hummock forming bog mosses <i>Sphagnum austinii</i> and <i>S. fuscum</i> will be have stable or increasing populations. Purple moor grass <i>Molinia caerulea</i> will be largely absent from the active raised mire. Scrub species such as willow <i>Salix</i> and birch <i>Betula</i> will also be largely absent. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion</u></p> <p>Cors Fochno (also known as Borth Bog) lies on the south side of the Dyfi estuary in Wales and forms a component part of the Dyfi Biosphere Reserve. Although a substantial part of the former peatland complex has been taken for agriculture, the surviving core area supports the largest expanse of primary near-natural raised bog in an estuarine context within the UK. The extensive cover of bog-myrtle <i>Myrica gale</i> and maritime margins with black bog-rush <i>Schoenus nigricans</i> are distinctive features of this site in an England and Wales context.</p> <p>The main threat to the active raised bog SAC feature in the short-medium term would be sudden, uncontrolled inundation generating high flow rates and leading to deeply incised erosion channels.</p> <p>The issue of damage to Cors Fochno and the associated designated areas are taken forward as part of developing the management of the area; recognising that to attempt to maintain defence to the feature would in itself damage the feature or make it increasingly vulnerable to more significant damage.</p> <p>The MR policy would result in the potential for sudden saline inundation in the initial stages which could affect the bog structure.</p> <p>A potential MR of reducing drainage in epochs 1 and 2 prior to MR and controlling inundation would ensure that the periphery of the bog is not affected.</p> <p>The flooding extent over 50 years does not significantly alter from the present day. The flooding extent over 100 years (epoch 3) will see extensive flooding of the entire SAC.</p>	<p>The MR policy needs to ensure that a controlled and gradual inundation takes place in association with CCW to ensure that the bog features are not affected. The main risks to do this successfully are related to the drainage present within the site at the time of inundation</p>	No adverse effect expected	Yes
Degraded raised bogs still capable of natural regeneration	NA	<ul style="list-style-type: none"> Extent of dredged bog with M18/M2 raised bog vegetation Condition of dredged bog with M18/M2 raised bog vegetation 	<ul style="list-style-type: none"> 80% of the degraded raised bog resource is restored to active raised bog, with the remainder, being hydrologically compatible with active bog. Vegetation corresponding to National Vegetation Classification raised mire communities types M2 and/or M18 will be stable or increasing in extent relative to that mapped in 2003. Areas/ stands of M18 vegetation will have a 20% or more cover of bog moss, and tree species and rhododendron will be rare or absent. Other non-woodland semi-natural vegetation communities, including poor fen, brackish fen and swamp will have tree species not exceeding their extent in 2003. Characteristic plant species of the mire margins and transitions, including alder buckthorn, black bog rush, brown beak-sedge, greater tussock sedge, lesser butterfly orchid, marsh cinquefoil, royal fern and veilwort will have stable or increasing populations. Species intolerant of impeded drainage such as bracken and most grass species will be absent or rare throughout the site, together with alien invasive species such as rhododendron. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>No loss of habitat will occur to this feature of the SAC as a result of the SMP policies.</p>			
Depressions on peat substrates of <i>Rhynchosporion</i>	NA		No conservation objectives identified in Core Management Plan.				

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Dyfi Estuary / Aber Dyfi SPA							
Internationally important Article 4.1 Species (wintering): Greenland white-fronted geese <i>Anser albifrons flavirostris</i>	Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	<ul style="list-style-type: none"> Population size Winter survival/mortality rate Proportion of juvenile geese to adults 	<ul style="list-style-type: none"> The Dyfi wintering population attains national importance level (ie.1% of the national (UK) population), annually. Winter mortality levels are <1% annually. Juvenile/ sub-adult birds comprise > 5% of the wintering population annually. All site-specific factors affecting the achievement of these conditions (eg. avoidable disturbance), are under control 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Coastal squeeze within the estuary and along the open coast would result in a loss of sandflat/sand dune/saltmarsh habitats used by the overwintering birds and used as intertidal feeding grounds (particularly) within the estuary. However, given the extent of this habitat within the estuary, and the planned MR in long term which will allow the estuary to respond more naturally to sea level rise, it is unlikely that any loss of habitat will have a significant impact on the integrity SPA features and the overwintering population. However, with it is likely that there will be an adverse impact of the loss of feeding habitat within the intertidal zone.</p> <p>Sandflats within the Dyfi Estuary are generally subject to a preferred option of HTL with some areas of MR.</p> <p>Within the inner and outer estuary, the preferred policies are for HTL and MR. It is likely that there will be a loss of sandflat habitat within the estuary as the defences are maintained over Epochs 1 and 2 for PU 10.5, 10.6, and 10.7, and for all epochs in PU 10.8, 10.11, 10.12, 10.13. Under the HTL policies for these units, the defence to the south and north side of the estuary would be continued for those PUs listed above.</p> <p>The decrease in intertidal habitat would also result in a reduction in the area of appropriate habitat for saltmarsh as the intertidal sandflats roll back into the saltmarsh habitat, particularly in PU 10.6.</p> <p>The loss of intertidal sandflat and saltmarsh habitat within the estuary (primarily as a result of HTL for PUs 10.6, 10.7, and 10.11) could reach up to 355.51ha over the 3 epochs; epoch 1 = 4.3ha; epoch 2 = 239.33ha, and epoch 3 = 111.33ha. MR in other PUs would create additional intertidal habitat and reduce the scale of the potential impact.</p>	Potentially move defences landward were feasible to allow mudflats to roll back in time with sea level rise.	Loss of intertidal habitat within the estuary could result in an adverse effect to the integrity of the populations due to the loss of supporting habitat for these SPA features.	No
	Salt marshes. Salt pastures. Salt steppes						
	Inland water bodies (standing water, running water)						
	Bogs, marshes and fens						
Improved grassland				<p><u>Saline intrusion:</u></p> <p>Saline intrusion and damage to the bog and grassland of this SPA is inevitable whether the defence is held or not. It is anticipated that saline intrusion under a 1m SLR scenario would result in a change to the bog vegetation, allowing for more saltmarsh species to establish, and may actually lead to biomass and nutrient rich waters to support large populations of birds.</p> <p>The risk to the grassland habitats is generally low within epoch 1 and 2 with the majority of the policy options within the estuary being for HTL in the first 2 epochs; however as the MR policy is introduced with epoch 3, within PUs 10.6 and 10.7, the intertidal habitat will role back, potentially reducing the availability of the grassland habitat.</p> <p>A total loss of up to 289ha of this habitat could occur within epoch 3.</p>	None identified	Though limited loss of supporting habitat, it could result in adverse effect on the integrity of the geese population in Epoch 3.	No

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Cors Fochno and Dyfi Ramsar							
Active raised bogs	NA	<ul style="list-style-type: none"> Extent of active raised bog Condition of active raised bog Extent and condition of depressions on peat substrates of the <i>Rhynchosporion</i> 	<ul style="list-style-type: none"> NVC type M18 <i>Sphagnum papillosum-Erica tetralix</i> raised mire and M2 <i>Sphagnum cuspidatum</i> bog pool communities will occupy > 95% of the 'primary' (ie uncut) bog area. The cover level of characteristic bog mosses (<i>Sphagnum</i> species) will be sufficiently high (>25%) to indicate healthy peat growth. 'Hummock and hollow' patterning will be present across the centre of the bog dome. The hollows (ie. <i>Rhynchosporion</i> depressions) will usually have greater sundew <i>Drosera anglica</i> present and will be increasing or maintaining their extent. The following species will be common in the active raised bog: <i>Sphagnum capillifolium</i>, <i>S. papillosum</i> and <i>S. magellanicum</i>, bog rosemary <i>Andromeda polifolia</i> and white-beak sedge <i>Rhynchospora alba</i>. The rare hummock forming bog mosses <i>Sphagnum austinii</i> and <i>S. fuscum</i> will be have stable or increasing populations. Purple moor grass <i>Molinia caerulea</i> will be largely absent from the active raised mire. Scrub species such as willow <i>Salix</i> and birch <i>Betula</i> will also be largely absent. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>The Dyfi estuarine complex is of outstanding physiographic interest. It includes sandbanks, mudflats, saltmarsh, peatbogs, river channels and creeks, with an extensive sand dune complex across the mouth of the estuary.</p> <p>Degraded raised bog also occurs widely around the periphery of the active core. Included here is a range of vegetation types in which peat formation has been arrested as a consequence of intensive drainage followed in places by peat removal and/or agricultural management. The vegetation cover of these areas is varied and includes grazed and ungrazed <i>Molinia</i> – <i>Myrica</i> swards, reed <i>Phragmites</i> stands, rush <i>Juncus</i> pasture, wet woodland and scrub, drier areas of acid.</p> <p>The central dome of the raised mire lies at an elevation of 5m+ above mean sea level. Modelling work suggests that under a 1m SLR scenario this core area of the bog would remain free of tidal incursion even under an extreme (1:100 yr tidal event).</p>			Yes
Depressions on peat substrates of the <i>Rhynchosporion</i>	NA			<p>The ability of the undrained bog surface to expand and rise under condition of high saturation levels could help to further buffer the ombrotrophic dome and prevent excessive flooding from ponded rain water.</p> <p>The introduction of seawater around the bog margins could conceivably lead to penetration of the heavier seawater into the lower layers of the peat causing a buoying up of the freshwater dome above.</p> <p>A 1m SLR would result in regular tidal inundation of significant areas of degraded raised bog, some of which is currently recovering towards 'active' peat-forming bog. This would cause a loss of typical bog vegetation and replacement with some type of saltmarsh community.</p> <p>Although some bog specialist species would face habitat and population reductions the elimination of any key species/ site features does not seem likely. Populations of some key species which are not specific to rain-fed raised bog e.g. otter, water vole, redshank, are likely to benefit from additional open water and higher nutrient status wetland habitat.</p> <p>The generation of new saltmarsh and freshwater/saline transitions would help off-set losses that would inevitably occur in the present estuary with a 1m SLR.</p> <p>The main threat to the active raised bog SAC feature in the short-medium term would appear to be sudden, uncontrolled inundation generating high flow rates and leading to deeply incised erosion channels.</p>	<p>The issue of damage to Cors Fochno and the associated designated areas are taken forward as part of developing the management of the area; recognising that to attempt to maintain defence to the feature would in itself damage the feature or make in increasingly vulnerable to more significant damage, therefore the preferred policy would be to HTL in epochs 1 and 2 and allow the defence to fail in epoch 3.</p>	No adverse effect expected	
Degraded raised bogs still capable of natural regeneration	NA	<ul style="list-style-type: none"> Extent of degraded bog with M18/M2 raised bog vegetation Condition of degraded bog with M18/M2 raised bog vegetation 	<ul style="list-style-type: none"> 80% of the degraded raised bog resource is restored to active raised bog, with the remainder, being hydrologically compatible with active bog. Vegetation corresponding to National Vegetation Classification raised mire communities types M2 and/or M18 will be stable or increasing in extent relative to that mapped in 2003. Areas/ stands of M18 vegetation will have a 20% or more cover of bog moss, and tree species and rhododendron will be rare or absent. Other non-woodland semi-natural vegetation communities, including poor fen, brackish fen and swamp will have tree species not exceeding their extent in 2003. Characteristic plant species of the mire margins and transitions, including alder buckthorn, black bog rush, brown beak-sedge, greater tussock sedge, lesser butterfly orchid, marsh cinquefoil, royal fern and veilwort will have stable or increasing populations. Species intolerant of impeded drainage such as bracken and most grass species will be absent or rare throughout the site, together with alien invasive species such as rhododendron. All factors affecting the achievement of these conditions are under control. 				

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	NA	•	•	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Coastal squeeze within the estuary result in a loss of sandflat/sand dune/saltmarsh habitats used by the overwintering birds and used as intertidal feeding grounds (particularly) within the estuary. However, given the extent of this habitat within the estuary, and the planned MR in long term which will allow the estuary to respond more naturally to sea level rise, it is unlikely that any loss of habitat will have a significant impact on the integrity of the Ramsar site and the overwintering population. However, with it is likely that there will be an adverse impact of the loss of feeding habitat within the intertidal zone.</p> <p>Sandflats within the Dyfi Estuary are generally subject to a preferred option of HTL with some areas of MR.</p> <p>Within the inner and outer estuary, the preferred policies are for HTL and MR. It is likely that there will be a loss of sandflat habitat within the estuary as the defences are maintained over Epochs 1 and 2 for PU 10.5, 10.6, and 10.7, and for all epochs in PU 10.8, 10.11, 10.12, 10.13. Under the HTL policies for these units, the defence to the south and north side of the estuary would be continued for those PUs listed above.</p> <p>The reduced area of intertidal habitat would also result in a reduction in the area of appropriate habitat for saltmarsh as the mudflats/sandflats roll back into the saltmarsh habitat, particularly within PU 10.6 and 10.11.</p> <p>The loss of intertidal sandflat and saltmarsh habitat within the estuary (primarily as a result of HTL for PUs 10.6, 10.7, and 10.11) could reach up to 355.51ha over the 3 epochs; epoch 1 = 4.3ha; epoch 2 = 239.33ha, and epoch 3 = 111.33ha. MR in other PUs would create additional intertidal habitat and significantly reduce the scale of the potential impact.</p>	Potentially move defences landward were feasible to allow mudflats to roll back in time with sea level rise.	Loss of intertidal habitat within the estuary and on the open coast will result in an adverse effect on the achievement of the Ramsar criterion.	No
Salt marshes. Salt pastures. Salt steppes							

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 11: PDZ 11 – Tonfanau to Mochras

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pen Llyn a'r Sarnau/ Lleyen Peninsula and the Sarnau SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> Range Structure and Function 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include:</p> <ul style="list-style-type: none"> Rocky intertidal reefs Rocky subtidal reefs Extensive boulder and cobble reefs – the sarnau Biogenic reefs (horse mussel <i>Modiolus modiolus</i> reef / green <i>crenella Musculus discors</i> reef and Honeycomb worm <i>Sabellaria alveolata</i> reef Carbonate reef formed by methane gas leaking from the seabed. <p>For the intertidal mudflat and sandflat feature these include:</p> <ul style="list-style-type: none"> <i>Mya arenaria</i> and polychaetes in muddy gravel Eel grass <i>Zostera marina</i> beds. Muddy gullies in the Mawddach estuary. <p>For the Salicornia feature this includes:</p> <ul style="list-style-type: none"> Communities characterised by the species <i>Sarcocornia perennis</i>. For the intertidal mudflats and sandflats and sandbanks features this requires an overall stability or increase in the amount of the feature, taking into account the areas of long term stability and localised losses and additions arising from environmental processes. For estuaries this includes the stability of sandy sediments in proportion to the muddy sediments. Restoration and recovery As part of this objective it should be noted that; for the estuaries feature additional land which should form an integral part of the estuarine ecosystem should be restored <p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include:</p> <ul style="list-style-type: none"> geology sedimentology geomorphology hydrography and meteorology water and sediment chemistry biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. below levels that would potentially result in increase in contaminant concentrations within sediments or biota. below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. For Atlantic salt meadows this includes the morphology of the saltmarsh creeks and pans. 	<p><u>Coastal Squeeze / Coastal Processes:</u> Pen Llyn a'r Sarnau on the north-west coast of Wales includes the sandbanks of Devil's Ridge, Bastram Shoal, the Tripods, and areas within and to the south of Tremadog Bay. These include examples of fully marine salinity, tide-swept sandbanks and relatively sheltered sandbanks. On Devil's Ridge, Bastram Shoal and the Tripods strong tides mean that the sand, shell and gravel sediments are constantly shifting, and as a result the sandbanks support animals that can tolerate these high levels of disturbance.</p> <p>Sandbanks may be impacted if there is a considerable change in the coastal processes as a result of the SMP policies within PDZ 11.</p> <p>The sandbank feature of the SAC is located a considerable distance from the coastline of PDZ 11 and is therefore not expected to be impacted.</p>	None required	No adverse effect expected	Yes
Estuaries	NA			<p><u>Coastal Squeeze / Coastal Processes:</u> Pen Llyn a'r Sarnau has representative examples of bar-built estuaries in north-west Wales, and includes the Glaslyn/Dwyrdd (PDZ 12), Mawddach (PDZ 11) and Dyfi estuaries (PDZ 10). There is a continuous gradient between the clean sands near the entrance to the sea and the mud or muddy sands in the sheltered extremes of the estuaries. The intertidal sandflats support communities of burrowing invertebrates, including dense populations of polychaete worms, crustaceans, bivalve molluscs and gastropod molluscs. Saltmarsh fringing the shores of the estuaries, and the saltmarsh creeks and pools, are important habitat features for juvenile fish.</p> <p>At the mouth of the Mawddach estuary, the preferred policy option for epoch 1 is HTL - maintaining and where appropriate taking local measures to improve flood defence and resilience, epoch 2 is MR - maintaining defences while taking positive action to relocate people from Fairbourne; and epoch 3 is NAI.</p> <p>Within the inner and outer estuary, the preferred policies are for HTL and MR. It is likely that there will be a loss of intertidal sandflat habitat within the estuary as the defences are maintained over Epochs 1 for PU 11.6, 11.9, 11.12, and for all epochs in PU 11.11. Under the HTL policies for these units, the defences to the south and north side of the estuary would be continued for those PUs listed above. This continues to constrain the way in which the estuary behaves and could result in a smaller ebb delta system which would then impose greater pressure on the dunes at the estuary mouth (PU 11.14). This may result in the long term in loss of important habitat (although not a qualifying feature).</p> <p>Although the area of estuary habitat would not be</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
			<ul style="list-style-type: none"> Restoration and recovery. As part of this objective it should be noted that; for the estuaries feature the structure and functions of the estuaries that have been damaged/degraded by the constraints of artificial structures such as flood banks, are restored. <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> species richness population structure and dynamics physiological health reproductive capacity recruitment mobility range 	<p>reduced, the structure and range of intertidal habitats would be expected to reduce in Epochs 1 and 2, albeit offset by MR policies in the longer term (epochs 2 and 3) within PUs 11.9 and 11.12 and for all 3 epochs in 11.10 and 11.13. Overall the MR policies within PU 11.10 and 11.13 would be expected to significantly increase the area of both estuary and intertidal habitats within epoch 3.</p> <p>Overall, the function, range and structure of the estuary habitats will remain in balance and favourable condition, and no adverse effect is expected.</p>			
Coastal lagoons	NA			Not present in PDZ 11.	None required	No adverse effect expected	Yes
Large shallow inlets and bays	NA		<p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Restoration and recovery As part of this objective it should be noted that; for the reefs feature the potential for expansion of the horse mussel <i>Modiolus modiolus</i> community off the north Llŷn coast is not inhibited. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>This feature is not present in PDZ 11, with the nearest - Tremadog Bay to the north in PDZ 12. However, the coastal processes in the area typically have a northward movement which may result in sediment deposits into the Bay as a result of the management options in PDZ 11.</p> <p>North of Barmouth the defences in front of Sunnysands (11.19) and in front of Islawffordd (11.20) do not appear to significantly interrupt long shore drift along the backshore at present. The main drift is considered to be along the lower foreshore. As the coast retreats to either side of both sections of defence, these defences will start having a more significant impact on the lower foreshore.</p>	None required	No adverse effect expected	Yes
Reefs	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Areas of subtidal reefs are located at either end of PDZ 11 (11.1 and 11.20); and intertidal reefs are located along the coast to the south of the estuary (11.1 to 11.3).</p> <p>NAI policy (11.20) will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease.</p> <p>The subtidal reefs within PDZ 11 comprise bedrock reef (biogenic reefs located in PDZ 13 to the north west). The HTL policies are located along the rocky foreshore of 11.1 and 11.3. The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of intertidal reef will occur naturally and not as a result of the SMP2 policy.</p> <p>MR (PU 11.2) in the long term would ensure that coastal squeeze would not be an issue, as reef habitat will be able to respond naturally to sea level rise.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mudflats and sandflats not covered by sea water at low tide	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p><i>Open Coastline</i></p> <p>The underlying intent along the coast north of Llanaber (PUs 11.1 to 11.4, 11.14 to 11.20; although the sandflats within PUs 11.14 to 11.19 are outside the SAC boundary, therefore only PUs 11.1 to 11.4, and 11.20 are considered) is to allow its natural development and not to be in a situation where there is commitment to larger and larger defences to protect assets indefinitely. The underlying intent is, therefore, to create space in terms of land use.</p> <p>HTL policies for the open coast could result in coastal squeeze of the intertidal sandflats in epochs 2 and 3 for PUs 11.1 and 11.3, and loss due to coastal squeeze is identified in PU 11.4.</p> <p>There are no existing defences within PU 11.20 and a policy of NAI will allow the sand dunes to continue to develop naturally.</p> <p><i>Mawddach Estuary</i></p> <p>Sandflats within the Mawddach Estuary are generally subject to a preferred option of HTL in epoch 1, with MR in epochs 2 and 3. Within the inner and outer estuary, the preferred policies are for HTL and MR. It is likely that there will be a loss of sandflat habitat within the estuary as the defences are maintained over all epochs in PUs 11.7, 11.8, and epoch 3 for PU 11.11. However, in epoch 1 for PUs 11.6, 11.7, 11.8, 11.9, 11.11 and 11.12 no net loss is identified from the response measurements undertaken for this SMP. The defences to the south and north side of the estuary would be continued for those PUs listed above.</p> <p>The structure and range of intertidal habitats would be expected to reduce in epoch 2, albeit offset by MR policies in the longer term (epochs 2 and 3) within PUs 11.9 and 11.12 and for all 3 epochs in 11.10 and 11.13. Overall the MR policies within PU 11.10 and 11.13 would be expected to significantly increase the area of both estuary and intertidal habitats in epoch 3.</p> <p>Saltmarsh habitat could be lost where there are HTL policies in epochs 2 and 3 as the intertidal sandflats roll back in response to sea level rise. However, no HTL policies are expected to result in constraint to the saltmarsh habitat.</p> <p>Where MR is planned in epochs 2 in PU 11.6; in epochs 2 and 3 in PUs 11.9, 11.10, 11.12; and within all 3 epochs in PU 11.13, this will allow for the saltmarsh habitat to move landward in the long term.</p> <p>The loss of intertidal sandflat predicted within this PDZ could reach up to 19.36ha over the 3 epochs (epoch 1 = no losses identified, epoch 2 = 12.29ha, and epoch 3 = 7.08ha).</p>			
<i>Salicornia</i> and other annuals colonising mud and sand	NA						
Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>)	NA				Potentially move defences landward were feasible to allow saltmarshes and mudflats to roll back in time with sea level rise.	The loss of intertidal sandflat feature in epochs 2 and 3 would result in an adverse effect.	No

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Submerged or partially submerged sea caves	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Areas of sea caves are identified within PU 11.1.</p> <p>The HTL line policy in place is to ensure the railway is not lost. The restriction of erosion of the cliffs may impact on the integrity of the sea cave features as they either are not able to function properly (continuing to erode) or are inundated with seawater as the sea level rises. However, the caves are not submerged at high tide and are outside the SAC boundary; therefore there will be no adverse impact.</p>	None Required	No adverse effect expected	Yes
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 		<p><u>Populations</u></p> <p>The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that :</p> <ul style="list-style-type: none"> for bottlenose dolphin, otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression grey seal populations should not be reduced as a consequence of human activity 	<p>The SMP policies would not be expected to have an impact on the integrity of the SAC or the bottlenose dolphin's resident there.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	Yes
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Estuaries Mudflats and sandflats not covered by sea water at low tide 		<p><u>Range</u></p> <p>The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future.</p> <p>As part of this objective it should be noted that for bottlenose dolphin, otter and grey seal:</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered There are appropriate and sufficient food resources within the SAC and beyond The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Otters may occur along discreet areas of coastline within PDZ 11 and within the estuary. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes.</p> <p>There is a potential loss of sandflat/ mudflat habitat in the estuary, which may be used as feeding or breeding habitat by otters. As the amount of habitat impacted is small, it is unlikely that there will be any adverse effect on the otters.</p>	None required	No adverse effect expected	Yes
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays Mudflats and sandflats not covered by sea water at low tide 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p><u>SUPPORTING HABITATS AND SPECIES</u></p> <p>The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution, extent, structure, function and quality of habitat, prey availability and quality. <p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. 	<p>Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of haul out sites within the Lleyn Peninsula and the Sarnau SAC over all 3 epochs.</p> <p>Grey seals may occur along discreet areas of coastline within PDZ 11. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p> <p>Overall, the area of estuary will not be reduced as a result of the SMP2 policies; therefore maintaining the seals food resources.</p> <p>Erosion may occur to haul out site locations where they are in the intertidal area and coastal squeeze may result in a general loss of haul out sites within the Lleyn Peninsula and the Sarnau SAC over all 3 epochs, however this will likely result in an alteration in the extent of haul out sites and not to the characteristics of the sites (e.g. disturbance etc). Therefore no adverse impact is expected.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Morfa Harlech a Morfa Dyffryn SAC							
Embryonic shifting dunes	NA	<ul style="list-style-type: none"> Extent of embryonic shifting dunes Condition of embryonic shifting dunes: species composition 	<ul style="list-style-type: none"> The total extent of the embryonic shifting dunes including those areas that are considered unfavourable or currently degraded is maintained at the area present when designated. The strand line and embryonic dune vegetation should be made up of typical species listed in the table below. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Morfa Harlech a Morfa Dyffryn (Morfa Harlech and Morfa Dyffryn) is one of two north Wales sites selected. Embryonic shifting dunes occur as long narrow zones mainly in the Morfa Harlech part of the complex. Both lyme-grass <i>Leymus arenarius</i> and sand couch <i>Elytrigia juncea</i> shifting dune vegetation have been recorded, but the latter is by far the more extensive of the two.</p> <p>The sand dunes of this SAC in PDZ 11 are located in PU 11.20 where no HTL or MR policies are identified, with NAI being the preferred policy for this whole unit, therefore no direct or indirect effects as a result of SMP2 policy is expected.</p>	None required	No adverse effect expected	Yes
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')	NA	<ul style="list-style-type: none"> Extent of shifting dunes Condition of shifting dunes: species composition 	<ul style="list-style-type: none"> The total extent of the shifting dunes including those areas that are considered unfavourable or currently degraded is maintained at the area present when designated, c.18.9 ha at Morfa Harlech which should be present both along the seaward dune ridge and inland within units 1, 3, 4 and 5 and at least 82ha of shifting dunes at Morfa Dyffryn which should be distributed throughout units 28, 27, 26, 24, and 23. The shifting dunes should be vegetated by species such as those listed in the table below. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Morfa Harlech a Morfa Dyffryn (Morfa Harlech and Morfa Dyffryn) is one of two sites selected to represent Shifting dunes along the shoreline with <i>Ammophila arenaria</i> in north Wales. It lies at the junction of two major marine sediment transport systems, and as a result provides an excellent example of active accretion. Shifting dunes are therefore extensive, being particularly well-developed at Morfa Dyffryn. Notable species recorded here include hound's-tongue <i>Cynoglossum officinale</i> and sand cat's-tail <i>Phleum arenarium</i>.</p> <p><i>The potential impacts are the same Embryonic shifting dunes above.</i></p>			
Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)	NA	<ul style="list-style-type: none"> Extent Species composition of the dune slacks Condition of the dune slacks 	<ul style="list-style-type: none"> The total extent of the humid dune slacks and dunes with <i>Salix repens</i> including those areas that are considered unfavourable or currently degraded is maintained at the area present when designated, some 65.1 ha at Morfa Harlech and 43.6 ha at Morfa Dyffryn. All successional phases of dune slack vegetation should be present at Morfa Dyffryn. The humid dune slacks should be vegetated with typical and desirable species such as those outlined in the table below. The dune slack vegetation should be free from scrub and should have a relatively short sward. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Both Morfa Harlech and Morfa Dyffryn have comparatively large areas of dunes with <i>Salix repens</i> ssp. <i>argentea</i> and Yorkshire-fog <i>Holcus lanatus</i>, especially in some of the older, more inland parts of the system. In addition, there are two other dune slack communities that support creeping willow.</p> <p><i>The potential impacts are the same Embryonic shifting dunes above.</i></p>			
Humid dune slacks	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Morfa Harlech a Morfa Dyffryn (Morfa Harlech and Morfa Dyffryn) is one of two sites representative of dune slack vegetation in north Wales. Examples of three different humid dune slack communities have been recorded within the complex. The dune slack vegetation with silverweed <i>Potentilla anserina</i> and common sedge <i>Carex nigra</i> is particularly well-developed.</p> <p><i>The potential impacts are the same Embryonic shifting dunes above.</i></p>			
Petalwort <i>Petalophyllum ralfsii</i>	Dune Slacks	<ul style="list-style-type: none"> Distribution and population size. Habitat condition. 	<ul style="list-style-type: none"> The population of <i>Petalophyllum</i> will remain stable or increase. <i>Petalophyllum</i> should be present at Morfa Harlech should be distributed across the northern part of Morfa Dyffryn sand dune system (Units 26 and 28). The successional young dune slacks that support the <i>Petalophyllum</i> should be in good condition as defined in the conservation objective for features 3 and 4 above. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Petalwort <i>Petalophyllum ralfsii</i> has been recorded in dune slacks in the two dune systems at this site; it is most frequent at Morfa Dyffryn.</p> <p><i>The potential impacts are the same Embryonic shifting dunes above.</i></p>			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Coedydd Derw a Safleoedd Ystlumod Meirion/ Meirionnydd Oakwoods and Bat Sites SAC							
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	NA		<ul style="list-style-type: none"> The total extent of the woodland area, including woodland canopy and scrub, woodland glades and associated dry heath, bracken and grassland shall be maintained as indicated on maps, see Annex 2, some 1826 ha in total. The location of the different woodland SAC features, as listed in the title above, will be as shown in Annex 2. The distribution of these woodland communities is largely a reflection of the topography, soils, geology and aspect and is unlikely to change. The tree canopy percentage cover within the woodland area for the whole SAC (see maps in Annex 2) shall be no less than 80%, 87% being the current canopy cover (excepting natural catastrophic events). Some units will have a lower canopy cover which is acceptable provided this is compatible with safeguard of the habitat, features and special interest. The canopy and shrub layer comprises locally native species, see Table 2 for the relevant species for each woodland SAC feature. There shall be sufficient natural regeneration of locally native trees and shrubs to maintain the woodland canopy and shrub layer, by filling gaps and allowing the recruitment of young trees, and encouraging a varied age structure. The typical ground layer species of each woodland SAC feature will be common, see Table 2. It is important for most of the woodland SAC that the vegetation does not become rank and overgrown with a height above 40cm and/or dominated by species such as bramble, ivy and young holly. Limits may be set on a unit or compartment basis. The abundance and distribution of common and typical (Atlantic, sub-Atlantic, western, oceanic) mosses and liverworts, lichens (and slime moulds), will be maintained or increased. Refer to indicative lists in Tables 3 and 4. The abundance and distribution of uncommon mosses and liverworts, lichens and slime moulds, will be maintained or increased. Refer to indicative lists in Tables 5 & 6 in Annex 3. There will be a scattering of 5 mature trees per hectare within the existing tree canopy or parkland, that is trees of c60cm diameter plus for oak and ash and/or with signs of decay, holes etc. In the longer-term, by 2060 there should be 1 veteran trees per hectare that is trees of c100cm diameter plus for oak and ash and 75cms birch. The volume of dead wood will exceed 30 cubic metres per hectare throughout and consist of a mixture of fallen trees (minimum 1 per hectare), broken branches, dead branches on live trees, and standing dead trees (minimum 1 per hectare). Volumes of deadwood are currently at relatively low levels because the woodlands, in general, have an even-age structure and lack mature trees and any quantity of deadwood because of past silvicultural management. Some lower plants are dead wood specialists but these woodlands tend to lack the rare dead wood invertebrate assemblage found in other parts of the UK. Invasive non-native species such as rhododendron, Japanese knotweed and Himalayan balsam will not be present. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>Meirionnydd Oakwoods are a very large example of old sessile oak woods in north Wales, with an outstanding Atlantic flora of bryophytes and lichens.</p> <p>Meirionnydd Oakwoods and Bat Sites include probably the most extensive area of alder <i>Alnus glutinosa</i> alluvial forest in north Wales. The woodland occurs on a dynamic floodplain, allowing cyclical regeneration and decay of alder stands, and the development of a natural structure, rich in dead wood.</p> <p>A number of areas which make up this SAC are adjacent to the Mawddach Estuary with particular close proximity in the upper estuary (PU 11.13). The preferred policy option within PU 11.13 is HTL in epoch 1 and MR in epochs 2 and 3.</p> <p>The MR policy could result in the loss of heathland or woodland habitat approximately 0.004ha from PU 11.13 over all 3 epochs.</p>	<p>The MR policy would need to ensure that there is no loss of woodland/heathland, and that it results in sensitive and natural flooding to any habitat rather than structures.</p>	<p>No adverse effect expected</p>	<p>Yes</p>
<i>Tilio-Acerion</i> forests of slopes, screes and ravines	NA						
Bog woodland	NA						
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) (Priority Feature)	NA	<ul style="list-style-type: none"> Extent of broad-leaved woodland and associated habitats Location of woodland types Tree canopy cover Canopy and shrub layer Native tree and shrub regeneration Ground layer Common mosses, liverworts, lichens and slime moulds Uncommon mosses, liverworts, lichen and slime moulds Mature/Veteran trees Dead wood 					

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	NA	<ul style="list-style-type: none"> Extent Distribution Typical species Undesirable and non-native species 	<ul style="list-style-type: none"> The extent of suitable river habitat within which the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation can occur should be stable as indicated on map in Annex 2. The current distribution (not known) of the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation should be stable or increasing. The river with floating vegetation may be dominated by water crowfoot species usually <i>Ranunculus fluitans</i>, (but this species is not recorded in Meirionnydd), <i>Callitriche stagnalis</i> and bryophytes. Species indicative of unfavourable condition for this feature e.g. filamentous algae associated with eutrophication and invasive non-native species, should be absent or below an acceptable threshold level, indicative of high ecological status, within the SAC. This attribute is considered further under factors. All factors affecting the achievement of these factors are under control 	<p><u>Saline intrusion:</u></p> <p>The Afon Mawddach is only subject to the SMP policies as far as the Normal Tidal Limit and would see the flooding extent of the river increase by approximately 120 m in epoch 3.</p> <p>The HTL policy at PU 11.12 (Penmaenpool) would see the defences being maintained along the shore of the Afon Wnion may result in saline intrusion into the river in response to sea level rise, as the river is unable to widen naturally. This will not affect the overall integrity of the water course.</p>	None required	No adverse effect expected	
European dry heaths	NA	<ul style="list-style-type: none"> Extent of dry heath Distribution of dry heath Vegetation composition Heath land structure Non-native species 	<ul style="list-style-type: none"> The total extent of the dry heath area, approximately 21 ha, shall be maintained. The distribution of the dry heath will at least be as shown on Core Management Plan map. The typical and uncommon species of the vegetation communities comprising the dry heath will be frequent and abundant, see Table 8. The structure of the heath should be maintained and restored, to show natural regeneration by layering and seeding, and to ensure that the component vegetation communities are naturally diverse (refer also to 3 above). Invasive non-native species such as conifers, rhododendron, Japanese knotweed and Himalayan balsam will not be present. The heath will be generally free from trees and at most have only a few individuals at a density of no more than 2 per hectare. Exceptions to this rule are transition zones from woodland to heath land where trees may be denser grading to open heath. Limits for woodland transition zones should be set on a unit or sub-unit basis. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>It is not possible to specifically identify this SAC feature from the maps, but generally, it is not expected that the SMP policies will have a significant impact on the habitat. The area of SAC adjacent to areas subject to SMP policies is small in comparison to the overall extent of the SAC habitat.</p> <p>The MR policy could result in the loss of heathland habitat approximately 0.004ha from PU 11.13 over all 3 epochs.</p>	None required	No adverse effect expected	
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles. Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>). <i>Tilio-Acerion</i> forests of slopes, screes and ravines	<ul style="list-style-type: none"> Population of lesser horseshoe bats Roosts Foraging or feeding habitat Range of the population 	<ul style="list-style-type: none"> The population of lesser horseshoe bats should be maintained at its current size and encouraged where possible to increase. See Table 7 for summaries of population counts at recorded roost sites and maps in Annex 4, showing the locations of the roosts. As there has been an upward trend in lesser horseshoe bats numbers in Wales it is reasonable to expect the Gwynedd population to increase. There are sufficient breeding roosts (buildings, structures and trees) and hibernation roosts (mines and buildings) of appropriate quality. The other types of roost such as night, transitional, leks and swarming sites, should also be maintained as our knowledge of these often significant roosts improves. Foraging or feeding habitat in the SAC and surrounding countryside, including grasslands and some gardens, is of appropriate quality, extent and connectivity across the range. The range of the population within the SAC/Gwynedd is stable or increasing. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>This large composite site includes most of the known maternity roosts in Meirionnydd and some hibernacula, and comprises the centre of distribution for lesser horseshoe bats <i>Rhinolophus hipposideros</i> in Wales. The sheltered river valleys provide excellent tree cover and numerous suitable maternity roosts.</p> <p>It is not expected that the SMP policies will have a significant impact on the Habitat of the Lesser horseshoe bat. The area of SAC adjacent to areas subject to SMP policies is small in comparison to the overall extent of the SAC habitat.</p> <p>The MR policy could result in the loss of heathland or woodland habitat approximately 0.004ha from PU 11.13 over all 3 epochs. The total loss of habitat is small and will therefore not impact on the foraging and range of the bat population.</p>	None required	No adverse effect expected	

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 12: PDZ 12 – Mochras to Pen ychain

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pen Llyn a'r Sarnau/ Lleyr Peninsula and the Sarnau SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> Range Structure and Function 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include:</p> <ul style="list-style-type: none"> Rocky intertidal reefs. Rocky subtidal reefs. Extensive boulder and cobble reefs – the sarnau. Biogenic reefs (horse mussel <i>Modiolus modiolus</i> reef / green <i>crenella Musculus discors</i> reef and Honeycomb worm <i>Sabellaria alveolata</i> reef. Carbonate reef formed by methane gas leaking from the seabed. <p>For the intertidal mudflat and sandflat feature these include:</p> <ul style="list-style-type: none"> <i>Mya arenaria</i> and polychaetes in muddy gravel. Eel grass <i>Zostera marina</i> beds. Muddy gullies in the Mawddach estuary. <p>For the <i>Salicornia</i> feature this includes:</p> <ul style="list-style-type: none"> Communities characterised by the species <i>Sarcocornia perennis</i>. For the intertidal mudflats and sandflats and sandbanks features this requires an overall stability or increase in the amount of the feature, taking into account the areas of long term stability and localised losses and additions arising from environmental processes. For estuaries this includes the stability of sandy sediments in proportion to the muddy sediments. Restoration and recovery. As part of this objective it should be noted that; for the estuaries feature additional land which should form an integral part of the estuarine ecosystem should be restored. <p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include:</p> <ul style="list-style-type: none"> geology sedimentology geomorphology hydrography and meteorology water and sediment chemistry biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. 	<p><u>Coastal Squeeze / Coastal Processes:</u> Not within PDZ 12.</p> <p><u>Coastal Squeeze / Coastal Processes:</u> Pen Llyn a'r Sarnau has representative examples of bar-built estuaries in north-west Wales, and includes the Glaslyn/Dwyrhyd (PDZ 12), Mawddach (PDZ 11), and Dyfi estuaries (PDZ 10). There is a continuous gradient between the clean sands near the entrance to the sea and the mud or muddy sands in the sheltered extremes of the estuaries. The intertidal sandflats support communities of burrowing invertebrates, including dense populations of polychaete worms, crustaceans, bivalve molluscs and gastropod molluscs. Saltmarsh fringing the shores of the estuaries, and the saltmarsh creeks and pools, are important habitat features for juvenile fish.</p> <p>The Glaslyn/Dwyrhyd Estuary has a variety of policy options within the PUs with the majority being NAI over all epochs which will allow the estuary to respond naturally to sea level rise. HTL for all epochs at PU 12.8 (Harlech Valley), 12.13 (The cob and Porthmadog) and 12.14 (Borth y Gest) and epoch 1 for 12.9 (Talsarnau) will see some localised coastal squeeze, but is generally not going to have a significant impact on the integrity of this SAC feature. The area of the estuary will not decrease as a result of these SMP2 policies; however the extent and structure of the estuary intertidal features will be altered with some habitats decreasing in extent whilst others increase as a result of coastal squeeze.</p> <p>The MR policy within PU 12.5, for all epochs, PUs 12.2, 12.3, and 12.9 in epochs 2 and 3 and 12.11 in epoch 1 will help to alleviate the coastal squeeze and will enable the estuary habitats to regain its natural balance of habitats. NAI in PU 12.10, 12.12 (all 3 epochs) and 12.11 (epochs 2 and 3) will enable the estuary and its intertidal features to respond naturally to sea level rise.</p> <p>The Arthro Estuary located within PUs 12.2 (HTL/MR/MR), 12.3 (HTL/MR/MR), 12.4 (HTL/HTL/HTL), and 12.5 (MR/MR/MR) will not decrease in extent; however the balance of estuary intertidal features will alter over time as a result of coastal squeeze.</p> <p>The MR policy within PUs 12.2 and 12.3 in epochs 2 and 3 and 12.5 in all 3 epochs will help to alleviate the coastal squeeze and will enable the estuary to regain its natural balance of habitats. HTL in all 3 epochs in 12.4 is not part of the SAC, therefore is not expected to have an adverse impact on the integrity of this SAC feature.</p>	None required	No adverse effect expected	Yes
Estuaries	NA				None required	No adverse effect expected	Yes
Coastal lagoons	NA			Not present in PDZ 12.	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Large shallow inlets and bays	NA		<ul style="list-style-type: none"> Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. For Atlantic salt meadows this includes the morphology of the saltmarsh creeks and pans Restoration and recovery As part of this objective it should be noted that; for the estuaries feature the structure and functions of the estuaries that have been damaged/degraded by the constraints of artificial structures such as flood banks, are restored. <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> species richness population structure and dynamics physiological health reproductive capacity recruitment mobility range <p>As part of this objective it should be noted that:</p>	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>The seabed of Tremadog Bay on the south side of the Lleyn Peninsula, north-west Wales, consists of a mosaic of different sediment types, which support a diverse mixture of plant and animal communities.</p> <p>The Tremadog Bay encompasses all of PDZ 12.</p> <p>The preferred management options within Tremadog Bay range from NAI, HTL and MR.</p> <p>In the PUs where NAI will be the policy option in the long term and where it was originally MR or HTL (PUs 12.22, 12.23 and 12.25) the policy option will allow the bay to start to erode more naturally.</p> <p>Coastal squeeze may be observed during all epochs, and a change in the coastal processes within the Bay as a result of the HTL and MR options. The area of the bay will not decrease as a result of the SMP 2 policies; however the extent of the features within the bay such as sandbanks, reefs and sandflats may change, although this will only result in a small percentage of the features changing and all features will still be present.</p> <p>The SMP policies are not expected to have a significant impact on the integrity of this SAC feature. Sediment drift and deposition may be altered by the SMP policies in PDZ 11, 12 and 13, but this is not likely to be extensive; and will not result in a reduction or alteration to the function and development of relevant habitats.</p>	None required	No adverse effect expected	Yes
Reefs	NA		<ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Restoration and recovery As part of this objective it should be noted that; for the reefs feature the potential for expansion of the horse mussel <i>Modiolus modiolus</i> community off the north Llŷn coast is not inhibited 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Small areas of intertidal and subtidal reefs occur in Tremadog Bay within PDZ 12.</p> <p>NAI policies will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease.</p> <p>Areas of subtidal reefs are located within PUs 12.18 to 12.25 where the policy options include HTL, NAI and MR.</p> <p>The Subtidal reefs within PDZ 12 comprise bedrock reef and biogenic reefs. The HTL policies are located along the back of the shingle foreshore of PUs 12.18 (epochs 1 and 2; MR epoch 3), 12.20 (all 3 epochs) and 12.24 (epoch 1) where settlements or roads are to be protected.</p> <p>The HTL policy will see a decrease in the area of shingle beach as the intertidal habitat is lost as a result of sea level rise in the short term (epochs 1 and 2); and will be alleviated by MR in the long term. As the shingle is removed from the beach. The shingle material may settle within the subtidal reefs, however, given that it is shingle material rather than sand, it is unlikely that the subtidal reefs will be smothered as a result of the settle material. Instead, the shingle material may result in increasing the extent of the reefs in the long term.</p> <p>MR in the long term would ensure that coastal squeeze would not be an issue, as reef habitat will be able to respond naturally to sea level rise.</p> <p>NAI policy (12.19, 12.21, 12.23 and 12.25) will allow the shingle beaches to continue to respond naturally to sea level rise.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mudflats and sandflats not covered by sea water at low tide	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>The majority of the coastline within PDZ 12 comprises large stretches of sandflats, some areas of saltmarsh, with the remaining coastline comprising shingle beaches.</p> <p>The area of sandflats and there relevant policy options are summarised below:</p> <p><i>Open Coastline</i></p> <p>The following PUs contain a policy of HTL for some or all epochs:</p> <p>12.2 = HTL/MR/MR 12.5 = MR/MR/MR 12.6 = HTL/HTL/HTL 12.17 = HTL/MR/MR 12.18 = HTL/HTL/MR (partial intertidal in site boundary) 12.20 = HTL/HTL/HTL 12.24 = HTL/MR/MR (shingle/sand patches)</p> <p>HTL could result in the loss of intertidal habitat as a result of coastal squeeze, though this would be localised for PUs 12.4 and 12.6, and no loss is for PUs 12.2, 12.17, and 12.24. Overall, no losses are expected in epoch 1, however, losses of 3.23ha of intertidal sandflat could occur in epoch 2 for PUs 12.6, 12.18, and 12.20, and 1.95ha in epoch 3 for PUs 12.6 and 12.20.</p> <p>MR for PUs 12.2, 12.3 and 12.5 specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system. This intent would feed through in the approach taken in epoch 1 (HTL) so that present management avoids future commitment to extending of hard defence.</p> <p><i>Estuary</i></p> <p>The following policy units contain a policy of HTL for some or all epochs:</p> <p>12.3 = HTL/MR/MR 12.4 = HTL/HTL/HTL 12.8 (estuary mouth; dunes) =HTL/HTL/HTL 12.9 = HTL/ MR/MR 12.13 = HTL/HTL/HTL 12.14 = HTL/HTL/HTL</p> <p>The sandflats where NAI is the preferred policy option will be able to respond to sea level rise and any loss of habitat from these PUs will occur naturally and not as a direct result of the SMP2 policy.</p> <p>Within the PUs with HTL in epoch 1 up to 0.23ha of intertidal habitat could be lost as a result of PUs 12.8 and 12.9, in epoch 2 up to 13.51ha could be lost as a result of PUs 12.4, 12.8, 12.13, and 12.14, and in epoch 3 up to 26.2ha could be lost as a result of PUs 12.4, 12.8, 12.13, and 12.14.</p> <p>At PU 12.16 the essential need for management (MR) in this area is allowing the natural development of the dunes. This is important from a nature conservation perspective but also in providing a robust natural defence against flooding. Therefore the MR policy planned over all 3 epochs will enable the sand dunes to respond naturally to sea level rise and ensure that the mouth of the estuary is maintained. A total of 9ha of habitat will be lost from PU 12.16.</p>	None identified	Due to the loss of intertidal sandflat habitat in all epochs an adverse effect is expected	No
Salicornia and other annuals colonising mud and sand	NA						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>The policy of NAI in the lower reaches of the estuary will allow the estuary to function more naturally, with saltmarshes migrating back with increasing saline inundation where feasible.</p> <p>HTL for all 3 epochs is the preferred option along two stretches of the outer estuary where defences are already in place (PUs 12.8 and 12.13); and one where there is a natural defence (12.14). HTL is also proposed in epoch 1 for PU 12.9.</p> <p>The HTL policies are located within an area of extensive intertidal habitat within the estuary which will respond to coastal squeeze and sea level rise by rolling back into the saltmarsh habitat (particularly within PUs 12.8, 12.9, and 12.13, where extensive saltmarsh habitat is present) ultimately resulting in a loss of saltmarsh habitat (the lower margins of the saltmarsh will become intertidal sandflat and mudflat habitat as tide levels rise).</p> <p>MR in epochs 2 and 3 for PU 12.9 will help alleviate the coastal squeeze occurring within the estuary.</p> <p>Overall, of the intertidal habitat extents identified above, in epoch 1 this would comprise approximately 0.21ha of saltmarsh habitat that could be lost in PUs 12.8 and 12.9, whilst in epoch 2 up to 5.55ha of saltmarsh could be lost in PUs 12.8, 12.13, and 12.14; and in epoch 3 up to 12.42ha of saltmarsh could be lost in PUs 12.8, 12.13, and 12.14. In total up to 18.18ha of saltmarsh habitat out within the 39.94ha of intertidal habitat identified above could be lost due to coastal squeeze as a result of HTL policies within this PDZ.</p>	Potentially move defences landward where possible (in particular within PUs 12.9) were feasible to allow mudflats to roll back in time with sea level rise.	Due to the loss of saltmarsh habitat in all epochs an adverse effect is expected	No
Submerged or partially submerged sea caves	NA			<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Areas of sea caves are identified at the mouth of the Glaslyn/Dwyrhyd Estuary – potentially encompassing PU 12.16 (positioned, at the end of the PU).</p> <p>The preferred policy for PU 12.16 is MR – with the main emphasis on sustaining the dune habitat. It is therefore assumed that the area of sea caves will be allowed to function and erode naturally in response to sea level rise potentially resulting in a loss of cave habitat – however, new caves will be created as part of the natural process.</p>	None required	No adverse effect expected	Yes
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p><u>Populations</u></p> <p>The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that :</p> <ul style="list-style-type: none"> for bottlenose dolphin, otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression grey seal populations should not be reduced as a consequence of human activity <p><u>Range</u></p> <p>The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future.</p> <p>As part of this objective it should be noted that for bottlenose dolphin, otter and grey seal:</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered There are appropriate and sufficient food resources within the SAC and beyond 	<p>The SMP policies would not be expected to have an impact on the integrity of the SAC or the bottlenose dolphin's resident there.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Estuaries Mudflats and sandflats not covered by sea water at low tide 		<ul style="list-style-type: none"> The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing <p>SUPPORTING HABITATS AND SPECIES</p> <p>The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include; <ul style="list-style-type: none"> distribution, extent, structure, function and quality of habitat, prey availability and quality. <p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour. For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. </p>	<p><u>Coastal Squeeze/ Coastal Processes</u></p> <p>Otters may occur along discreet areas of coastline within PDZ 12 and within the estuary. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes</p> <p>There is a potential reduction in the extent of intertidal habitat within the estuary over the 3 epochs, however, remaining intertidal area and estuary features are not expected to limit or reduce the food resource or obstruct the movement of the otter population.</p> <p>Overall, the area of estuary will not be reduced as a result of the SMP2 policies; therefore maintaining the otters food resources. However, there will be a loss of intertidal habitat within the estuary.</p>	None required	No adverse effect expected	Yes
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays Mudflats and sandflats not covered by sea water at low tide 		<ul style="list-style-type: none"> For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. 	<p>Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of haul out sites within the Lleyn Peninsula and the Sarnau SAC SAC over all 3 epochs.</p> <p>Grey seals may occur along discreet areas of coastline within PDZ 12. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p> <p>Overall, the area of estuary will not be reduced as a result of the SMP2 policies; therefore maintaining the seals food resources.</p> <p>Erosion may occur to haul out site locations where they are in the intertidal area and coastal squeeze may result in a general loss of haul out sites within the Lleyn Peninsula and the Sarnau SAC over all 3 epochs, however this will likely result in an alteration in the extent of haul out sites and not to the characteristics of the sites (e.g. disturbance etc). Therefore no adverse impact is expected.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Morfa Harlech a Morfa Dyffryn SAC							
Embryonic shifting dunes	NA	<ul style="list-style-type: none"> Extent of embryonic shifting dunes Condition of embryonic shifting dunes: species composition 	<ul style="list-style-type: none"> The total extent of the embryonic shifting dunes including those areas that are considered unfavourable or currently degraded is maintained at the area present when designated. The strand line and embryonic dune vegetation should be made up of typical species listed in the table below. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal Squeeze / Coastal Processes</u></p> <p>Morfa Harlech a Morfa Dyffryn (Morfa Harlech and Morfa Dyffryn) is one of two north Wales sites selected. Embryonic shifting dunes occur as long narrow zones mainly in the Morfa Harlech part of the complex. Both lyme-grass <i>Leymus arenarius</i> and sand couch <i>Elytrigia juncea</i> shifting dune vegetation have been recorded, but the latter is by far the more extensive of the two.</p> <p>The sand dunes of this SAC in PDZ 12 are located in PU 12.7 and partially PU12.1 and PU 12.8. PU 12.7 and 12.1 have a preferred policy of NAI which would allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion, would not be as a result of SMP2 policy.</p> <p>The HTL policy at 12.8 (part of PU 12.8) is required to maintain the rollover embankment at the back of the dunes. This defence only encompasses less than half of PU 12.8 and is principally backing the saltmarsh and heath habitat rather than the sand dunes. The small area of dune located within PU 12.8 is not constrained by the existing defence. Therefore it is anticipated that the HTL policy within PU 12.8 will not have an adverse impact on the sand dunes.</p>	Explore integrated management of the dunes as a whole to allow the body of the sand to migrate landward to maintain the dune system and their relevant position to the tidal frame.	No adverse effect expected	Yes
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')	NA	<ul style="list-style-type: none"> Extent of shifting dunes Condition of shifting dunes: species composition 	<ul style="list-style-type: none"> The total extent of the shifting dunes including those areas that are considered unfavourable or currently degraded is maintained at the area present when designated, c.18.9 ha at Morfa Harlech which should be present both along the seaward dune ridge and inland within units 1, 3, 4 and 5 and at least 82 ha of shifting dunes at Morfa Dyffryn which should be distributed throughout units 28, 27, 26, 24, and 23. The shifting dunes should be vegetated by species such as those listed in the table below. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Morfa Harlech a Morfa Dyffryn (Morfa Harlech and Morfa Dyffryn) is one of two sites selected to represent shifting dunes along the shoreline with <i>Ammophila arenaria</i> in north Wales. It lies at the junction of two major marine sediment transport systems, and as a result provides an excellent example of active accretion. Shifting dunes are therefore extensive, being particularly well-developed at Morfa Dyffryn. Notable species recorded here include hound's-tongue <i>Cynoglossum officinale</i> and sand cat's-tail <i>Phleum arenarium</i>.</p> <p><i>The potential impacts are the same Embryonic shifting dunes above.</i></p>			Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)	NA	<ul style="list-style-type: none"> Extent Species composition of the dune slacks Condition of the dune slacks 	<ul style="list-style-type: none"> The total extent of the humid dune slacks and dunes with <i>Salix repens</i> including those areas that are considered unfavourable or currently degraded is maintained at the area present when designated, some 65.1 ha at Morfa Harlech and 43.6 ha at Morfa Dyffryn. All successional phases of dune slack vegetation should be present at Morfa Dyffryn. The humid dune slacks should be vegetated with typical and desirable species such as those outlined in the table below. The dune slack vegetation should be free from scrub and should have a relatively short sward. All factors affecting the achievement of these conditions are under control. 	<u>Coastal Squeeze/ Coastal Processes</u> Both Morfa Harlech and Morfa Dyffryn have comparatively large areas of dunes with <i>Salix repens</i> ssp. <i>argentea</i> and Yorkshire-fog <i>Holcus lanatus</i> , especially in some of the older, more inland parts of the system. In addition, there are two other dune slack communities that support creeping willow. <i>The potential impacts are the same Embryonic shifting dunes above.</i>			
Humid dune slacks	NA			<u>Coastal Squeeze/ Coastal Processes:</u> Morfa Harlech a Morfa Dyffryn (Morfa Harlech and Morfa Dyffryn) is one of two sites representative of dune slack vegetation in north Wales. Examples of three different humid dune slack communities have been recorded within the complex. The dune slack vegetation with silverweed <i>Potentilla anserina</i> and common sedge <i>Carex nigra</i> is particularly well-developed. <i>The potential impacts are the same Embryonic shifting dunes above.</i>			
Petalwort <i>Petalophyllum ralfsii</i>	Dune Slacks			<ul style="list-style-type: none"> Distribution and population size. Habitat condition. 			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Coedydd Derw a Safleoedd Ystumod Meirion/ Meirionnydd Oakwoods and Bat Sites SAC							
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	NA	<ul style="list-style-type: none"> Extent of broad-leaved woodland and associated habitats Location of woodland types Tree canopy cover Canopy and shrub layer Native tree and shrub regeneration Ground layer Common mosses, liverworts, lichens and slime moulds Uncommon mosses, liverworts, lichen and slime moulds Mature/Veteran trees Dead wood 	<ul style="list-style-type: none"> The total extent of the woodland area, including woodland canopy and scrub, woodland glades and associated dry heath, bracken and grassland shall be maintained as indicated on maps, see Annex 2, some 1826 ha in total. The location of the different woodland SAC features, as listed in the title above, will be as shown in Annex 2. The distribution of these woodland communities is largely a reflection of the topography, soils, geology and aspect and is unlikely to change. The tree canopy percentage cover within the woodland area for the whole SAC (see maps in Annex 2) shall be no less than 80%, 87% being the current canopy cover (excepting natural catastrophic events). Some units will have a lower canopy cover which is acceptable provided this is compatible with safeguard of the habitat, features and special interest. The canopy and shrub layer comprises locally native species, see Table 2 for the relevant species for each woodland SAC feature. There shall be sufficient natural regeneration of locally native trees and shrubs to maintain the woodland canopy and shrub layer, by filling gaps and allowing the recruitment of young trees, and encouraging a varied age structure. The typical ground layer species of each woodland SAC feature will be common, see Table 2. It is important for most of the woodland SAC that the vegetation does not become rank and overgrown with a height above 40cm and/or dominated by species such as bramble, ivy and young holly. Limits may be set on a unit or compartment basis. The abundance and distribution of common and typical (Atlantic, sub-Atlantic, western, oceanic) mosses and liverworts, lichens (and slime moulds), will be maintained or increased. Refer to indicative lists in Tables 3 and 4. The abundance and distribution of uncommon mosses and liverworts, lichens and slime moulds, will be maintained or increased. Refer to indicative lists in Tables 5 & 6 in Annex 3. There will be a scattering of 5 mature trees per hectare within the existing tree canopy or parkland, that is trees of c60cm diameter plus for oak and ash and/or with signs of decay, holes etc. In the longer-term, by 2060 there should be 1 veteran trees per hectare that is trees of c100cm diameter plus for oak and ash and 75cms birch. The volume of dead wood will exceed 30 cubic metres per hectare throughout and consist of a mixture of fallen trees (minimum 1 per hectare), broken branches, dead branches on live trees, and standing dead trees (minimum 1 per hectare). Volumes of deadwood are currently at relatively low levels because the woodlands, in general, have an even-age structure and lack mature trees and any quantity of deadwood because of past silvicultural management. Some lower plants are dead wood specialists but these woodlands tend to lack the rare dead wood invertebrate assemblage found in other parts of the UK. Invasive non-native species such as rhododendron, Japanese knotweed and Himalayan balsam will not be present. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>Meirionnydd Oakwoods are a very large example of old sessile oak woods in north Wales, with an outstanding Atlantic flora of bryophytes and lichens. Notable bryophyte species include the endangered <i>Sematophyllum demissum</i> and the nationally scarce <i>Campylopus setifolius</i> and <i>Leptoscyphus cuneifolius</i>. The woods – primarily of sessile oak <i>Quercus petraea</i> with an acidic ground flora – extend along a series of inter-connected valleys, with a wide variety of slopes and aspects, and include many narrow ravines and gorges. Management is diverse, including grazed and ungrazed areas, and stands managed silviculturally, or as minimum intervention. This wide range of environmental, topographic and management conditions contributes to the high biological diversity of this exceptional site. The woods extend into the adjacent Rhinog cSAC.</p> <p>Meirionnydd Oakwoods and Bat Sites comprise probably the most extensive area of alder <i>Alnus glutinosa</i> alluvial forest in north Wales. The woodland occurs on a dynamic floodplain, allowing cyclical regeneration and decay of alder stands, and the development of a natural structure, rich in dead wood. There is a rich ground flora, with notable plant species including globe-flower <i>Trollius europaeus</i> and creeping-jenny <i>Lysimachia nummularia</i>. The woodland occurs in a mosaic with species-rich marsh and wet grassland, and is continuous with stands of old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles. The site is also important for wildfowl.</p> <p>The nearest PU to this SAC is PU 12.11 where the preferred policy is MR in epoch 1 and NAI in epochs 2 and 3. However, the 100 year flooding or erosion extent modelling have determined that there will be no impact on the integrity of this SAC and calculations have derived that no habitat loss occurs to this SAC within PDZ 12.</p>	None required	No adverse effect expected	Yes
<i>Tilio-Acerion</i> forests of slopes, screes and ravines	NA						
Bog woodland	NA						
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	NA						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	NA	<ul style="list-style-type: none"> Extent Distribution Typical species Undesirable and non-native species 	<ul style="list-style-type: none"> The extent of suitable river habitat within which the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation can occur should be stable as indicated on map in Annex 2. The current distribution (not known) of the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation should be stable or increasing. The river with floating vegetation may be dominated by water crowfoot species usually <i>Ranunculus fluitans</i>, (but this species is not recorded in Meirionnydd), <i>Callitriche stagnalis</i> and bryophytes. Species indicative of unfavourable condition for this feature eg. filamentous algae associated with eutrophication and invasive non-native species, should be absent or below an acceptable threshold level, indicative of high ecological status, within the SAC. This attribute is considered further under factors. All factors affecting the achievement of these factors are under control 				
Northern Atlantic wet heaths with <i>Erica tetralix</i>	NA		No conservation objectives identified in Core Management Plan				
European dry heaths	NA	<ul style="list-style-type: none"> Extent of dry heath Distribution of dry heath Vegetation composition Heath land structure Non-native species 	<ul style="list-style-type: none"> The total extent of the dry heath area, approximately 21 ha, shall be maintained. The distribution of the dry heath will at least be as shown on Core Management Plan map. The typical and uncommon species of the vegetation communities comprising the dry heath will be frequent and abundant, see Table 8. The structure of the heath should be maintained and restored, to show natural regeneration by layering and seeding, and to ensure that the component vegetation communities are naturally diverse (refer also to 3 above). Invasive non-native species such as conifers, rhododendron, Japanese knotweed and Himalayan balsam will not be present. The heath will be generally free from trees and at most have only a few individuals at a density of no more than 2 per hectare. Exceptions to this rule are transition zones from woodland to heath land where trees may be denser grading to open heath. Limits for woodland transition zones should be set on a unit or sub-unit basis. All factors affecting the achievement of these conditions are under control. 				
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles. Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>). <i>Tilio-Acerion</i> forests of slopes, screes and ravines.	<ul style="list-style-type: none"> Population of lesser horseshoe bats Roosts Foraging or feeding habitat Range of the population 	<ul style="list-style-type: none"> The population of lesser horseshoe bats should be maintained at its current size and encouraged where possible to increase. See Table 7 for summaries of population counts at recorded roost sites and maps in Annex 4, showing the locations of the roosts. As there has been an upward trend in lesser horseshoe bats numbers in Wales it is reasonable to expect the Gwynedd population to increase. There are sufficient breeding roosts (buildings, structures and trees) and hibernation roosts (mines and buildings) of appropriate quality. The other types of roost such as night, transitional, leks and swarming sites, should also be maintained as our knowledge of these often significant roosts improves. Foraging or feeding habitat in the SAC and surrounding countryside, including grasslands and some gardens, is of appropriate quality, extent and connectivity across the range. The range of the population within the SAC/Gwynedd is stable or increasing. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>This large composite site includes most of the known maternity roosts in Meirionnydd and some hibernacula, and comprises the centre of distribution for lesser horseshoe bats <i>Rhinolophus hipposideros</i> in Wales. The sheltered river valleys provide excellent tree cover and numerous suitable maternity roosts.</p> <p>It is not expected that the SMP policies will have a significant impact on the Habitat of the Lesser horseshoe bat. The area of SAC adjacent to areas subject to SMP policies is small in comparison to the overall extent of the SAC habitat.</p> <p>As there is no habitat loss to the bat supporting habitat as a result of the policies in PDZ 12, there will be no impact to the bats.</p>			

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 13: PDZ 13 – Pen ychain to Trwyn Cilan

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> Range Structure and Function 	<p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include:</p> <ul style="list-style-type: none"> geology sedimentology geomorphology hydrography and meteorology water and sediment chemistry. biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. below levels that would potentially result in increase in contaminant concentrations within sediments or biota. below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. For Atlantic salt meadows this includes the morphology of the saltmarsh creeks and pans. Restoration and recovery As part of this objective it should be noted that; for the estuaries feature the structure and functions of the estuaries that have been damaged/degraded by the constraints of artificial structures such as flood banks, are restored. <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> species richness population structure and dynamics physiological health reproductive capacity recruitment mobility range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Restoration and recovery As part of this objective it should be noted that; for the reefs feature the potential for expansion of the horse mussel <i>Modiolus modiolus</i> community off the north Llyn coast is not inhibited. 	Not within PDZ 13.	None required	No adverse effect expected	Yes
Estuaries	NA			<p><u>Coastal Squeeze/ Coastal Processes:</u> Pen Llyn a'r Sarnau has representative examples of bar-built estuaries in north-west Wales, and includes the Glaslyn/Dwryrd, Mawddach and Dyfi estuaries. There is no designated estuary habitat within PDZ 13.</p>	None required	No adverse effect expected	Yes
Coastal lagoons (Priority feature)	NA			<p><u>Saline intrusion:</u> The priority feature of this SAC is not located within PDZ 13 and is therefore not expected to be impacted by the policy options in this PDZ.</p>	None required	No adverse effect expected	Yes
Large shallow inlets and bays	NA			<p>The seabed of Tremadog Bay on the south side of the Llyn Peninsula, north-west Wales, consists of a mosaic of different sediment types, which support a diverse mixture of plant and animal communities. The Tremadog Bay encompasses all of PDZ 13. The preferred management options within Tremadog Bay range from NAI, HTL and MR. NAI at Porth Ceiriad Headland and St Tudwal's Island (PU 13.16 to 13.19) will allow the coast to respond naturally to sea level rise and result in natural erosion (0.7ha over 3 epochs), and a natural source of material to the coast. HTL at PUs 13.2 (epoch 1); 13.3, 13.4, 13.5, 13.6 (all 3 epochs); 13.7, 13.11, 13.12 (epoch 1); 13.13 (all 3 epochs); 13.14 and 13.15 (epoch 1) will constrain the intertidal habitat but will not result in loss of the inlet feature, though it may reduce the extent of some of the components, and increase others. Overall no adverse impact is anticipated.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Reefs	NA		<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include:</p> <ul style="list-style-type: none"> Rocky intertidal reefs. Rocky subtidal reefs. Extensive boulder and cobble reefs – the sarnau. Biogenic reefs (horse mussel <i>Modiolus modiolus</i> reef / green <i>crenella Musculus discors</i> reef and Honeycomb worm <i>Sabellaria alveolata</i> reef. Carbonate reef formed by methane gas leaking from the seabed. 	<p><u>Coastal Squeeze / Coastal Processes:</u> Areas of subtidal reefs are located within PDZ 13; no intertidal reefs are present. The subtidal reefs within PDZ 13 comprise bedrock reef and biogenic reefs.</p> <p>NAI policy (13.1; 13.9, 13.10, 13.16 to 13.19) will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term.</p> <p>The HTL policies are located along the rocky foreshore of 13.6, 13.7, 13.8, 13.13, 13.14 and 13.15. As the rocky foreshore is constrained by high ground within PUs 13.8, 13.13, 13.14 and 13.15 the loss of intertidal foreshore will occur naturally and not as a result of the SMP2 policy and the sediment supply to the subtidal reefs will be altered naturally.</p> <p>Natural high ground is also located within PUs 13.4, 13.5, 13.11 and 13.12 where there is a HTL policy, therefore loss of intertidal habitat and change of sediment supply to subtidal reefs will occur naturally and not as a result of the SMP2 policy.</p> <p>In the long term where MR is the preferred policy within PUs 13.7, 13.8, 13.11, 13.12, 13.14 and 13.15 would ensure that coastal squeeze would not be an issue, as reef habitat will be able to respond naturally to sea level rise and in the short to long term, the extent of the Subtidal reef habitat will not decrease.</p>	None required	No adverse effect expected	Yes
Mudflats and sandflats not covered by sea water at low tide	NA		<p><u>Range</u> For the intertidal mudflat and sandflat feature these include:</p> <ul style="list-style-type: none"> <i>Mya arenaria</i> and polychaetes in muddy gravel. Eel grass <i>Zostera marina</i> beds. Muddy gullies in the Mawddach estuary. <p>For the <i>Salicornia</i> feature this includes:</p> <ul style="list-style-type: none"> Communities characterised by the species <i>Sarcocornia perennis</i>. For the intertidal mudflats and sandflats and sandbanks features this requires an overall stability or increase in the amount of the feature, taking into account the areas of long term stability and localised losses and additions arising from environmental processes. For estuaries this includes the stability of sandy sediments in proportion to the muddy sediments. Restoration and recovery. As part of this objective it should be noted that; for the estuaries feature additional land which should form an integral part of the estuarine ecosystem should be restored. 	<p><u>Coastal Squeeze / Coastal Processes:</u> The majority of the coastline within PDZ 13 consists of large stretches of beaches (sandflats).</p> <p>NAI has been planned for areas of cliffs typically at the headland (PU 13.10) and areas of sandflats (PU 13.9 and PU 13.1) which will be able to respond naturally to sea level rise.</p> <p>HTL along the remaining coast will result in coastal squeeze of the sandflats. However, the boundary of the Lleyn Peninsula and the Sarnau SAC only extends to the MLW mark of the sandflats within PUs 13.6, 13.7, 13.8, 13.9 and 13.18. The HTL policies are only planned within PU 13.6 (all 3 epochs) and 13.7 and 13.8 (epoch 1) with MR planned for epochs 2 and 3.</p> <p>No habitat loss has been identified for epoch 1 due to HTL for PU 13.6; 13.7, and 13.8. Within PU 13.6, the HTL policy for epoch 2 could result in up to 1.19ha of intertidal sandflat being lost, and during epoch 3 up to 0.8ha of sandflat could be lost.</p> <p>Despite HTL being the preferred policy along the majority of the coast, a limited loss of intertidal habitat occurs as a result of HTL policy for PU 13.2; 13.7, 13.8, 13.11, 13.12, 13.14, and 13.15 in epoch 1; PUs 13.3, 13.4, 13.5 13.6, 13.13 for all epochs.</p> <p>The most significant loss of intertidal habitat occurs in PU 13.5 (centre of Pwllheli Harbour), and this PU along with others where loss is predicted to occur are outside the Site boundary.</p>	None Identified	The loss of intertidal sandflat feature within the site as a result of HTL at PU 13.6 would result in an adverse effect.	No
Salicornia and other annuals colonising mud and sand	NA						
Atlantic salt meadows (<i>Glaucocystis</i>)	NA		<p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the</p>	Not present within PDZ 13.	None required	No adverse effect expected	Yes

Puccinellietalia

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
<i>maritimae</i>)			habitat are not degraded. For Atlantic salt meadows this includes the morphology of the saltmarsh creeks and pans.				
Submerged or partially submerged sea caves	NA		As above for all features.	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Only one location has been identified as containing sea caves within PDZ 13, on St Tudwal's Islands (PU13.17).</p> <p>The preferred policy for 13.17 is NAI where NAI the cliffs can erode naturally in response to sea level rise potentially resulting in a loss of cave habitat – however, new caves will be created as part of the natural process.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 13.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 		<p><u>Populations</u> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that :</p> <ul style="list-style-type: none"> for bottlenose dolphin, otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression. grey seal populations should not be reduced as a consequence of human activity. 	<p>The SMP policies would not be expected to have an impact on the integrity of the SAC or the bottlenose dolphin's resident there.</p> <p>The SMP policies will not result in a reduction in the area or extent of the estuary or inlet/bay habitat that supports the dolphin population, therefore it is concluded that there will be no adverse effect.</p>	None required	No adverse effect expected	Yes
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Estuaries Mudflats and sandflats not covered by sea water at low tide 		<p>Range The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin, otter and grey seal:</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered. There are appropriate and sufficient food resources within the SAC and beyond. The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing. <p>SUPPORTING HABITATS AND SPECIES The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution extent structure function and quality of habitat prey availability and quality. 	<p><u>Coastal Squeeze/ Coastal Processes:</u> The majority of the coastline within PDZ 13 consists of large stretches of beaches (sandflats), with the overall favoured management policy being HTL or MR. NAI has been planned for areas of cliffs typically at the headland (PU 13.10) and areas of sandflats (PU 13.9 and PU 13.1) which will be able to respond naturally to sea level rise.</p> <p>significant coastal squeeze and loss of beach habitat may be observed from South Beach (PU13.6) to Traeth Crugan (PU 13.8)</p> <p>The estuary and River Soch are not part of this SAC – therefore the planned policy options are not expected to have an impact on the integrity of the otter habitat.</p> <p>Overall, the area of estuary will not be reduced as a result of the SMP2 policies; therefore maintaining the otters food resources. However, there will be a loss of intertidal habitat within the estuary.</p>	None required	No adverse effect expected	Yes
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Mudflats and sandflats not covered by sea water at low tide 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour. For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. 	<p>Nearly 40% (about 125,000) of the world population of grey seals is found in the British Isles, with a relatively stable population of about 6,000 in Wales.</p> <p>Coastal squeeze may result in a general loss of haul out sites within the Lley Peninsula and the Sarnau SAC over all 3 epochs.</p> <p>Coastal Squeeze/ Coastal Processes: significant coastal squeeze and loss of beach habitat may be observed from South Beach (PU13.6) to Traeth Crugan (PU 13.8).</p> <p>Overall, the area of estuary will not be reduced as a result of the SMP2 policies; therefore maintaining the seals food resources.</p> <p>Erosion may occur to haul out site locations where they are in the intertidal area and coastal squeeze may result in a general loss of haul out sites within the Lley Peninsula and the Sarnau SAC over all 3 epochs, however this will likely result in an alteration in the extent of haul out sites and not to the characteristics of the sites (e.g. disturbance etc). Therefore no adverse impact is expected.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Clogwyni Pen Llyn/ Seacliffs of Lleyn SAC							
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	<ul style="list-style-type: none"> Extent of the coastal heath (dry and maritime) Condition of the coastal heath (dry and maritime) Associated significant features 	<ul style="list-style-type: none"> Extent of coastal or maritime heath is stable or increasing. At least 2 different coastal or maritime heath NVC community types are present and support a range of characteristic plant species. Areas of heath form a mosaic with maritime grassland with patches of bare ground – no blanket heath cover. Pioneer heath plants are present. Grazing occurs annually at a level which prevents a long sward developing but does not suppress heather growth or flowering. A low sward height in grassland habitats and an open, varied structure in heath will be maintained within the cliff top habitats for feeding chough, without causing a decline in the extent or quality of the grassland and heathland. The coastal heath will comprise vegetation with <i>Ulex gallii</i> present and at least 30% ericoid cover, usually <i>Calluna vulgaris</i>, with at least one maritime indicator present such as <i>Armeria maritima</i>, <i>Plantago maritima</i>, <i>Plantago coronopus</i> or <i>Scilla verna</i>. Healthy populations of the rare vascular plants (including spotted rockrose, <i>Tuburaria guttata</i>, prostrate broom <i>Cytisus scoparius</i> subsp. <i>maritimus</i>, rock sea-lavender <i>Limonium britannicum</i> subsp. <i>pharense</i>, small adder's tongue, <i>Ophioglossum azoricum</i>, western clover, <i>Trifolium occidentale</i> and sharp rush <i>Juncus acutus</i>) will be present. Healthy populations of rare non-vascular plant species, including moss and liverwort species with restricted European distributions, and the soil-living lichens, ciliate strap-lichen <i>Heterodermia leucomela</i> and golden hair lichen <i>Teloschistes flavicans</i> will be present. Species indicative of rank or unmanaged conditions including European gorse, <i>Ulex europeaus</i>, bracken <i>Pteridium aquilinum</i>, foxglove <i>Digitalis purpurea</i>, ragwort species <i>Senecio</i> sp, dock <i>Rumex obtusifolius</i> and nettle <i>Urtica dioica</i> should be largely absent. Grass species indicative of improvement including creeping bent <i>Agrostis stolonifera</i>, cock's foot <i>Dactylus glomerata</i>, perennial rye-grass <i>Lolium perenne</i> and Yorkshire fog <i>Holcus lanatus</i> should be largely absent. Associated important species such as feeding chough (on the mainland and <i>Ynys Enlli</i>) and nesting Manx shearwater (on <i>Ynys Enlli</i>) are recorded in coastal or maritime heath areas. All factors affecting the achievement of these conditions, including grazing intensity and burning, will be under control. 	<p><u>Restriction of coastal erosion:</u></p> <p>The entire section of the Seacliffs of Lleyn SAC within PDZ 13 have a preferred policy of NAI – therefore the cliffs will be able to respond naturally to sea level rise and any loss of habitat as a result of erosion will be the result of natural processes and not the SMP.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 13.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal SPA							
Internationally important Article 4.1 Species (wintering): Chough <i>Pyrhocorax pyrrhocorax</i>	Improved grassland	<ul style="list-style-type: none"> Breeding Population Breeding Population Foraging habitat condition 	<ul style="list-style-type: none"> The breeding population of Chough within the SPA is at least 18 pairs, of which at least 12 should be within the Glannau Ynys Gybi / Tre Wilmot SSSI and at least 6 should be within the Glannau Rhoscolyn SSSI. The non-breeding population of Chough is at least 18 individuals or 2.5 % of the GB wintering population. Sufficient suitable habitat (including Atlantic sea cliffs, maritime grassland, maritime heath, wet heath and dry heath) is present and in appropriate condition to support the breeding populations. All factors affecting the achievement of these conditions are under control. 	<u>Coastal Squeeze / Coastal Processes:</u> The entire section of the Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal SPA within PDZ 13 have a preferred policy of NAI (13.16, 13.17, 13.18 and 13.19) – therefore the cliffs and other associated coastal habitat will be able to respond naturally to sea level rise and any loss of habitat as a result of erosion will be the result of natural processes and not the SMP.	None required	No adverse effect expected	Yes
	Heathland and scrub						
	Dry grassland						
	Coastal sand dunes. Sand beaches. Machair						
	Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)						

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 14: PDZ 14 – Trwyn Cilan to Carreg Ddu

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pen Llyn a'r Sarnau/ Lley Peninsula and the Sarnau SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> Range Structure and Function 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include:</p> <ul style="list-style-type: none"> Rocky intertidal reefs. Rocky subtidal reefs. Extensive boulder and cobble reefs – the sarnau. Biogenic reefs (horse mussel <i>Modiolus modiolus</i> reef / green crenella <i>Musculus discors</i> reef and Honeycomb worm <i>Sabellaria alveolata</i> reef. Carbonate reef formed by methane gas leaking from the seabed. <p>For the intertidal mudflat and sandflat feature these include:</p> <ul style="list-style-type: none"> <i>Mya arenaria</i> and polychaetes in muddy gravel. Eel grass <i>Zostera marina</i> beds. Muddy gullies in the Mawddach estuary. <p>For the Salicornia feature this includes:</p> <ul style="list-style-type: none"> Communities characterised by the species <i>Sarcocornia perennis</i>. For the intertidal mudflats and sandflats and sandbanks features this requires an overall stability or increase in the amount of the feature, taking into account the areas of long term stability and localised losses and additions arising from environmental processes. For estuaries this includes the stability of sandy sediments in proportion to the muddy sediments. Restoration and recovery As part of this objective it should be noted that; for the estuaries feature additional land which should form an integral part of the estuarine ecosystem should be restored. 	<p>No HTL or MR policies are identified, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes
Estuaries	NA		<p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include:</p> <ul style="list-style-type: none"> geology sedimentology geomorphology hydrography and meteorology water and sediment chemistry biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: 	<p>No HTL or MR policies are identified, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes
Coastal lagoons (Priority Feature)	NA			<p>The priority feature of this SAC is not located within the vicinity of PDZ 14.</p>	None Required	No adverse effect expected	Yes
Large shallow inlets and bays	NA			<p>No HTL or MR policies are identified, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>The Large shallow bay of Hell's Mouth is located in PUs 14.2, 14.2 and 14.3 where the preferred policy option in NAI.</p> <p>No habitat loss occurs within these PUs.</p>	None Required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Reefs	NA		<ul style="list-style-type: none"> - at or below existing statutory guideline concentrations. - below levels that would potentially result in increase in contaminant concentrations within sediments or biota. - below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. <ul style="list-style-type: none"> • For Atlantic salt meadows this includes the morphology of the saltmarsh creeks and pans. • Restoration and recovery • As part of this objective it should be noted that; for the estuaries feature the structure and functions of the estuaries that have been damaged/degraded by the constraints of artificial structures such as flood banks, are restored. <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> • species richness • population structure and dynamics • physiological health • reproductive capacity • recruitment • mobility • range 	<p>No HTL or MR policies are identified, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>The reefs located within PDZ 14 are unlikely to be impacted as a result of the SMP. As the coast is able to respond naturally to sea level rise, there is unlikely to be any loss of the reef habitat, with the potential for more reef habitat to be created.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes
Mudflats and sandflats not covered by sea water at low tide	NA		<p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. • the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. • Restoration and recovery • As part of this objective it should be noted that; for the reefs feature the potential for expansion of the horse mussel <i>Modiolus modiolus</i> community off the north Llŷn coast is not inhibited. 	<p>No HTL or MR policies are identified, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect on intertidal mudflat, sandflat and saltmarsh: could have a beneficial effect by creating new intertidal and subtidal habitat and delivering new sediment to sand and dune habitats.</p>			
Salicornia and other annuals colonising mud and sand	NA			<p>The defended section of Aberdaron Village (PU 14.8) has a HTL policy in epochs 1 and 3 and MR in epoch 2 (MR will involve the improvement of the existing defence). The SAC only encompasses a small area of sandflat within PU 14.8. Modelling has shown that no mudflat or sandflat fronting Aberdaron will be lost from within the SAC in PU 14.8.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	NA						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Submerged or partially submerged sea caves	NA			<p>No HTL or MR policies are identified in the locations of submerged sea caves, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>The caves located within PDZ 14 may be lost as the sea level rises and the cliffs erode naturally – however, new caves will be created as part of the natural process.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 	<ul style="list-style-type: none"> Populations Range Supporting Habitats and Species 	<p><u>Populations</u> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> for bottlenose dolphin, otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression grey seal populations should not be reduced as a consequence of human activity <p><u>Range</u> The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin, otter and grey seal:</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered There are appropriate and sufficient food resources within the SAC and beyond The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing 	<p>No HTL or MR policies are identified with the exception of Aberdaron, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>It is not expected for the policies within PDZ to affect the distribution range or the supporting habitat of the Bottlenose Dolphins in the Lleyn Peninsula and the Sarnau SAC.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Sandbanks slightly covered by sea water 		<p><u>SUPPORTING HABITATS AND SPECIES</u> The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution, extent, structure, function and quality of habitat, prey availability and quality. <p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. 	<p>No HTL or MR policies are identified in areas that could support otter, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>Otters occur along a very limited length of coastline within PDZ 14. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Estuaries Large shallow inlets and bays 		<ul style="list-style-type: none"> Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. 	<p>No HTL or MR policies are identified with the exception of Aberdaron, with NAI being the preferred policy for the majority of this unit; therefore no direct or indirect effects as a result of coastal management policy are expected due to the lack of direct habitat loss.</p> <p>Grey seals may occur along discreet areas of coastline within PDZ 14. However, loss of habitat will be minimal in the long term as a result of coastal squeeze as the coast naturally erodes, therefore not impacting on the seal haul out sites.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Corsydd Llyn/ Lleyn Fens SAC							
Alkaline fens	NA	<ul style="list-style-type: none"> Extent of alkaline fen habitat Habitat quality 	<ul style="list-style-type: none"> Alkaline fen occupies at least 7.1% of the total SAC area (i.e. 20.14ha) and occupies areas which have potential to support this habitat. Alkaline fen is found on all 4 component sites. The following plants are common in the alkaline fen: <i>Schoenus nigricans</i>, yellow starry feather moss <i>Campyllum stellatum</i>, great fen sedge <i>Cladium mariscus</i> (up to 1m tall), blunt flowered rush <i>Juncus subnodulosus</i>, sweet gale <i>Myrica gale</i>, moss <i>Drepanocladus revolvens</i>, bladderwort <i>Utricularia minor</i>, butterwort <i>Pinguicula vulgaris</i>. Species indicative of drainage or agricultural modification, such as yorkshire fog <i>Holcus lanatus</i>, bramble <i>Rubus</i> spp., nettle <i>Urtica dioica</i>, are largely absent from the alkaline fen. Purple moor grass <i>Molinia caerulea</i> does not exceed 25% of ground cover and is restricted to drier areas. Bare ground should constitute no more than about 5% of the ground cover (perhaps 10% on the wettest soligenous examples of alkaline fen). Alkaline Fen exhibits a diverse age and height structure across the site (tussocks are undamaged and 20% short grazed, 50% mature – 30% in between including bare ground). Scrub species such as willow <i>Salix</i> spp and birch <i>Betula pubescens</i> are largely absent from the alkaline fen. Invasive, non-native species are absent. Appropriate grazing is managed across 100% of the site. Standing or running surface water is present between tussocks throughout the year, and visible over 30% of the tussock covered area. All Hydrological (diffuse, surface and sub-surface) pathways (inputs and outputs) should be restored and/or intact (includes ditch infilling, blocking, diversion and re-engineering). Water quality is appropriate to the needs of the vegetation and species – namely base-rich but nutrient-poor. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>The area of coast nearest the Lleyn Fens SAC has a preferred policy of NAI, therefore the natural erosion of the coast and alteration of hydrology would develop naturally and not as a direct result of the SMP. There do not appear to be any obvious land constraints which would alter the integrity of this SAC.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p>	None Required	No adverse effect expected	Yes
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	NA	<ul style="list-style-type: none"> Extent of calcareous fen habitat Habitat quality of open <i>Cladium</i> sward Habitat quality of <i>Cladium</i> dominated vegetation 	<ul style="list-style-type: none"> Calcareous fen occupies at least 3.8% (10.78ha) of <i>Cors Geirch</i>. The following plants are common in the Calcareous fen: Great fen sedge <i>Cladium mariscus</i>, blunt flowered rush <i>Juncus subnodulosus</i>, and sweet gale <i>Myrica gale</i>; bog-bean <i>Menyanthes trifoliata</i> marsh cinquefoil <i>Potentilla palustris</i>, bladderwort <i>Utricularia vulgaris</i> and slender sedge <i>Carex lasiocarpa</i>, are locally prominent. Species indicative of drainage or agricultural modification, such as yorkshire fog <i>Holcus lanatus</i>, bramble <i>Rubus</i> spp., nettle <i>Urtica dioica</i> are largely absent from the calcareous fen. Purple moor grass <i>Molinia caerulea</i> does not exceed 25% of ground cover. Calcareous Fen exhibits a diverse age and height structure across the site (20% short sward ?) Pure (monospecific) stands of single age and structure <i>Cladium mariscus</i> do not exceed 50% of the feature area. Scrub species such as willow <i>Salix</i> and birch <i>Betula</i> are largely absent from the calcareous fen. Non native invasive species are absent. Standing surface water is present over most of the winter period. Groundwater is within 15cm of surface in mid summer. All Hydrological (diffuse, surface and sub-surface) pathways (inputs and outputs) are restored and/or intact (includes ditch infilling, blocking, diversion and re-engineering). Water quality is appropriate to the needs of the vegetation – namely base-rich but nutrient poor. All factors affecting the achievement of these conditions are under control. 		None Required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Desmoulin`s whorl snail <i>Vertigo moulinsiana</i>	<ul style="list-style-type: none"> Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>. Alkaline fens. 	<ul style="list-style-type: none"> Extent of <i>Vertigo moulinsiana</i> Extent of suitable habitat Soil moisture content 	<ul style="list-style-type: none"> <i>Vertigo moulinsiana</i> is frequent in suitable habitat at Cors Geirch SSSI. Average height of vegetation is not less than 70cm when measured in August. Greater and lesser pond sedges, tussock sedge and saw sedge, branched burr-reed and yellow flag indicate favourable conditions, as can sparse <i>Phragmites</i> and <i>Phalaris</i>. Ground moisture levels at between damp and very wet. Prevent any significant rise in water levels such that aquatic plants (e.g. watercress <i>Rorippa nasturtium-aquaticum</i>, and fool's water cress <i>Apium nodiflorum</i>) become dominant. Light or rotational grazing or no grazing. No increase in scrub cover compared to the baseline. Avoid heavy grazing and poaching of banks. Prevent any decrease in water quality leading to eutrophication and changes in nutrient status. No increase in rank herbs (particularly nettle <i>Urtica dioica</i>, thistle <i>Cirsium</i> spp., meadowsweet <i>Filipendula ulmaria</i>, great willow-herb <i>Epilobium hirsutum</i> and butterbur <i>Petasites</i> spp.) with vegetation height increasing. 		None Required	No adverse effect expected	Yes
Geyer`s whorl snail <i>Vertigo geyeri</i>	<ul style="list-style-type: none"> Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>. Alkaline fens. 	<ul style="list-style-type: none"> Extent of <i>Vertigo geyeri</i> Extent of suitable habitat Habitat quality 	<ul style="list-style-type: none"> <i>Vertigo geyeri</i> is frequent in suitable habitat at Cors Geirch. There are abundant areas of flushed fen grassland (M13 / feature 2) with sedge/moss lawns 5- 15cm tall, containing species such as <i>Carex viridula</i> subsp. <i>brachyrrhyncha</i>, mosses <i>Drepanocladus revolvens</i>, <i>Campylium stellatum</i>, <i>Pinguicula vulgaris</i>, <i>Briza media</i>, <i>Equisetum palustre</i>, <i>Juncus articulatus</i> together with scattered tussocks of <i>Schoenus nigricans</i> no greater than 80cm tall. The ground supporting suitable habitat is saturated and there is a spring flow with a network of dendritic trickles. Light grazing of suitable habitat with ponies and/or cattle. 		None Required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Clogwyni Pen Llyn/ Seacliffs of Lleyn SAC							
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	<ul style="list-style-type: none"> Extent of the coastal heath (dry and maritime) Condition of the coastal heath (dry and maritime) Associated significant features 	<ul style="list-style-type: none"> Extent of coastal or maritime heath is stable or increasing. At least 2 different coastal or maritime heath NVC community types are present and support a range of characteristic plant species. Areas of heath form a mosaic with maritime grassland with patches of bare ground – no blanket heath cover. Pioneer heath plants are present. Grazing occurs annually at a level which prevents a long sward developing but does not suppress heather growth or flowering. A low sward height in grassland habitats and an open, varied structure in heath will be maintained within the cliff top habitats for feeding chough, without causing a decline in the extent or quality of the grassland and heathland. The coastal heath will comprise vegetation with <i>Ulex gallii</i> present and at least 30% ericoid cover, usually <i>Calluna vulgaris</i>, with at least one maritime indicator present such as <i>Armeria maritima</i>, <i>Plantago maritima</i>, <i>Plantago coronopus</i> or <i>Scilla verna</i>. Healthy populations of the rare vascular plants (including spotted rockrose, <i>Tuburaria guttata</i>, prostrate broom <i>Cytisus scoparius</i> subsp. <i>maritimus</i>, rock sea-lavender <i>Limonium britannicum</i> subsp. <i>pharense</i>, small adder's tongue, <i>Ophioglossum azoricum</i>, western clover, <i>Trifolium occidentale</i> and sharp rush <i>Juncus acutus</i>) will be present. Healthy populations of rare non-vascular plant species, including moss and liverwort species with restricted European distributions, and the soil-living lichens, ciliate strap-lichen <i>Heterodermia leucomela</i> and golden hair lichen <i>Teloschistes flavicans</i> will be present. Species indicative of rank or unmanaged conditions including European gorse, <i>Ulex europeaus</i>, bracken <i>Pteridium aquilinum</i>, foxglove <i>Digitalis purpurea</i>, ragwort species <i>Senecio</i> sp, dock <i>Rumex obtusifolius</i> and nettle <i>Urtica dioica</i> should be largely absent. Grass species indicative of improvement including creeping bent <i>Agrostis stolonifera</i>, cock's foot <i>Dactylus glomerata</i>, perennial rye-grass <i>Lolium perenne</i> and Yorkshire fog <i>Holcus lanatus</i> should be largely absent. Associated important species such as feeding chough (on the mainland and <i>Ynys Enlli</i>) and nesting Manx shearwater (on <i>Ynys Enlli</i>) are recorded in coastal or maritime heath areas. All factors affecting the achievement of these conditions, including grazing intensity and burning, will be under control. 	<p>The Seacliffs of Lleyn SAC covers over half of the coastline within PDZ 14.</p> <p>No HTL or MR policies are identified immediately within or adjacent to the site boundary, with NAI being the preferred policy for the majority of this PDZ, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect long term, as the cliffs would be allowed to erode naturally and allow vegetated succession.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p> <p><i>Any loss occurring to this interest feature is a result of natural processes.</i></p>	None Required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal SPA							
Internationally important Article 4.1 Species (wintering): Chough <i>Pyrrhocorax pyrrhocorax</i>	Improved grassland Heathland and scrub	<ul style="list-style-type: none"> Breeding Population Breeding Population Foraging habitat condition 	<ul style="list-style-type: none"> The breeding population of Chough within the SPA is at least 18 pairs, of which at least 12 should be within the Glannau Ynys Gybi / Tre Wilmot SSSI and at least 6 should be within the Glannau Rhoscolyn SSSI. The non-breeding population of Chough is at least 18 individuals or 2.5 % of the GB wintering population. Sufficient suitable habitat (including Atlantic sea cliffs, maritime grassland, maritime heath, wet heath and dry heath) is present and in appropriate condition to support the breeding populations. All factors affecting the achievement of these conditions are under control. 	<u>Erosion:</u> The area of has a preferred policy of NAI, therefore, natural erosion of these supporting habitats would occur, but not as a direct result of the active SMP2 policy. This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14. <i>Any loss occurring to this interest feature is a result of natural processes.</i>	None Required	No adverse effect expected	Yes
	Dry grassland			<u>Coastal squeeze / coastal processes:</u> No HTL or MR policies are identified within or adjacent to the site boundary, with NAI being the preferred policy for the majority of this PDZ, therefore no direct or indirect effects as a result of coastal management policy are expected.	None Required	No adverse effect expected	
	Coastal sand dunes. Sand beaches. Machair			No significant effect on intertidal mudflat, sandflat and saltmarsh: could have a beneficial effect by creating new intertidal and subtidal habitat and delivering new sediment to sand and dune habitats. This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14. <i>Any loss occurring to this interest feature is a result of natural processes.</i>	None Required	No adverse effect expected	
	Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Glannau Aberdaron and Ynys Enlli / Aberdaron Coast and Bardsey Island SPA							
Internationally important Article 4.1 Species (breeding): chough <i>Pyrhocorax pyrrhocorax</i> .	Marine areas and sea inlets	<ul style="list-style-type: none"> Breeding population Breeding population Foraging habitat condition 	<ul style="list-style-type: none"> The breeding population of Chough within the SPA is at least 18 pairs, of which at least 12 should be within the Glannau Ynys Gybi / Tre Wilmot SSSI and at least 6 should be within the Glannau Rhoscolyn SSSI. The non-breeding population of Chough is at least 18 individuals or 2.5 % of the GB wintering population. Sufficient suitable habitat (including Atlantic sea cliffs, maritime grassland, maritime heath, wet heath and dry heath) is present and in appropriate condition to support the breeding populations. All factors affecting the achievement of these conditions are under control. 	<u>Coastal squeeze / coastal processes:</u> No HTL or MR policies are identified within the site boundary, with NAI being the preferred policy for the majority of this PDZ, therefore no direct or indirect effects as a result of coastal management policy is expected. This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14. <i>Any loss occurring to this interest feature is a result of natural processes.</i>	None Required	No adverse effect expected	Yes
	Heathland and scrub			<u>Coastal squeeze / coastal processes:</u> No HTL or MR policies are identified within the site boundary, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14. <i>Any loss occurring to this interest feature is a result of natural processes.</i>	None Required	No adverse effect expected	Yes
	Shingle and sea cliffs			<u>Coastal squeeze / coastal processes:</u> No HTL or MR policies are identified within the site boundary, with NAI being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. No significant effect long term as the cliffs would be allowed to erode naturally and allow vegetated succession. This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14. <i>Any loss occurring to this interest feature is a result of natural processes.</i>	None Required	No adverse effect expected	Yes
	Dry grassland			<u>Erosion:</u> The area of has a preferred policy of NAI, therefore, natural erosion of these supporting habitats would occur, but not as a direct result of the active SMP2 policy. This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14. <i>Any loss occurring to this interest feature is a result of natural processes.</i>	None Required	No adverse effect expected	Yes
	Improved grassland			Humid grassland. Mesophile grassland.	<u>Erosion:</u> The area of has a preferred policy of NAI, therefore, natural erosion of these supporting habitats would occur, but not as a direct result of the active SMP2 policy. This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14. <i>Any loss occurring to this interest feature is a result of natural processes.</i>	None Required	No adverse effect expected

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 15: PDZ 15 – Carreg Ddu to Trwyn y Tal

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Pen Llyn a'r Sarnau/ Lleyn Peninsula and the Sarnau SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> • Range • Structure and function 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include:</p> <ul style="list-style-type: none"> • Rocky intertidal reefs • Rocky subtidal reefs • Extensive boulder and cobble reefs – the sarnau • Biogenic reefs (horse mussel <i>Modiolus modiolus</i> reef / green crenella <i>Musculus discors</i> reef and Honeycomb worm <i>Sabellaria alveolata</i> reef • Carbonate reef formed by methane gas leaking from the seabed. <p>For the intertidal mudflat and sandflat feature these include:</p> <ul style="list-style-type: none"> • Mya arenaria and polychaetes in muddy gravel. • Eel grass <i>Zostera marina</i> beds. • Muddy gullies in the Mawddach estuary. <p>For the Salicornia feature this includes:</p> <ul style="list-style-type: none"> • Communities characterised by the species <i>Sarcocornia perennis</i>. • For the intertidal mudflats and sandflats and sandbanks features this requires an overall stability or increase in the amount of the feature, taking into account the areas of long term stability and localised losses and additions arising from environmental processes. • For estuaries this includes the stability of sandy sediments in proportion to the muddy sediments. • Restoration and recovery • As part of this objective it should be noted that; for the estuaries feature additional land which should form an integral part of the estuarine ecosystem should be restored. <p><u>Structure and Function</u> The physical, biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include:</p> <ul style="list-style-type: none"> • geology • sedimentology • geomorphology • hydrography and meteorology • water and sediment chemistry • biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> • at or below existing statutory guideline concentrations. • within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. • Contaminant levels in the water column and sediments derived from human 	Not within PDZ 15.	None required	No adverse effect expected	Yes
Estuaries	NA						
Coastal lagoons	NA						
Large shallow inlets and bays	NA						

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Reefs	NA		<p>activity to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations. below levels that would potentially result in increase in contaminant concentrations within sediments or biota. below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. <ul style="list-style-type: none"> For Atlantic salt meadows this includes the morphology of the saltmarsh creeks and pans. Restoration and recovery As part of this objective it should be noted that; for the estuaries feature the structure and functions of the estuaries that have been damaged/degraded by the constraints of artificial structures such as flood banks, are restored. 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>A small area of rocky intertidal reef is located within PU 15.2. Within this PU the intention is to manage the retreat of the cliffs and sandflat habitat over epochs 2 and 3, allowing the coast to respond more naturally.</p> <p>It is unlikely that the preferred policy option will have an impact on the integrity of this SAC feature.</p>	None required	No adverse effect expected	Yes
Mudflats and sandflats not covered by sea water at low tide	NA		<p><u>Typical Species</u></p> <p>The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> species richness population structure and dynamics physiological health reproductive capacity recruitment mobility range 	<p><u>Coastal Squeeze / Coastal Processes:</u></p> <p>Loss of intertidal sandflats will occur as a result of coastal squeeze and a change in the coastal processes resulting from the preferred HTL and MR policies at Porth Dinllaen, Porth Nefyn West, Trefor and Aberdesach.</p>			
Salicornia and other annuals colonising mud and sand	NA		<p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Restoration and recovery As part of this objective it should be noted that; for the reefs feature the potential for expansion of the horse mussel <i>Modiolus modiolus</i> community off the north Llŷn coast is not inhibited. 	<p>However, the MR policy in epochs 2 and 3 would be in response to this coastal squeeze with only local level of control.</p> <p>However, the SAC only encompasses PU 15.2 (Porth Dinllaen). The beach at Porth Dinllaen is backed by a natural defence of high ground.</p>	Policy would change from HTL to MR in response to potential coastal squeeze.	No adverse effect expected	Yes
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	NA			<p>As a result of preferred policy a total of 0.1ha of sandflat habitat within PU 15.2 in epoch 1. This loss of qualifying feature would affect achievement of favourable condition for the site.</p>			
Submerged or partially submerged sea caves	NA			<p><u>Coastal Squeeze/ Coastal Processes:</u></p> <p>It appears that the submerged or partially submerged sea caves are located on the coast where NAI is the preferred policy; therefore the cliffs can erode naturally in response to sea level rise.</p> <p>If the caves are lost due to the eroding cliffs, this would be as a result of natural processes and not the SMP policies.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bottlenose dolphin <i>Tursiops truncatus</i>	<ul style="list-style-type: none"> Estuaries 		<p><u>Populations</u> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that :</p> <ul style="list-style-type: none"> for bottlenose dolphin, otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression. grey seal populations should not be reduced as a consequence of human activity. 	It is not expected for the policies within PDZ to effect the distribution range or the supporting habitat of the Bottlenose Dolphins in the Lleyn Peninsula and the Sarnau SAC	None required	No adverse effect expected	Yes
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Estuaries Mudflats and sandflats not covered by sea water at low tide 	<ul style="list-style-type: none"> Populations Range Supporting habitats and species 	<p><u>Range</u> The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin, otter and grey seal:</p> <ul style="list-style-type: none"> Their range within the SAC and adjacent inter-connected areas is not constrained or hindered. There are appropriate and sufficient food resources within the SAC and beyond. The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing. <p><u>SUPPORTING HABITATS AND SPECIES</u> The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include;</p> <ul style="list-style-type: none"> distribution, extent, structure, function and quality of habitat, prey availability and quality. 	<p><u>Coastal Squeeze / Coastal Processes:</u> Loss of intertidal mudflats will occur as a result of coastal squeeze and a change in the coastal processes resulting from the preferred HTL and MR policies at Porth Dinllaen, Porth Nefyn West, Trefor and Aberdesach.</p> <p>Mudflats and sandflats throughout the remaining coastline where NAI is the preferred policy will be able to respond naturally to sea level rise.</p> <p>The SAC only lies within PU 15.2 where the preferred policy in HTL and MR.</p>	None required	No adverse effect expected	Yes
Grey seal <i>Halichoerus grypus</i>	<ul style="list-style-type: none"> Estuaries Mudflats and sandflats not covered by sea water at low tide 		<p>As part of this objective it should be noted that;</p> <ul style="list-style-type: none"> The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour. For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing. Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin and otter, populations should be increasing. 	<p>The area of sandflat within PU 15.2 may be used by otters and seals as breeding or haul out sites, although no data was available to quantify this.</p> <p>As per the potential impacts for mudflats/sandflats, the total area of sandflat lost in PU 15.2 is 0.1ha over the 100 year period.</p> <p>No known haul out sites occur within PU 15.2 (where the SAC occurs), however given the extent of human activity and settlements within PU 15.2 are not likely to be utilised as haul out sites by seals.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Clogwyni Pen Llyn/ Seacliffs of Lleyn SAC							
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	<ul style="list-style-type: none"> Extent of the coastal heath (dry and maritime) Condition of the coastal heath (dry and maritime) Associated significant features 	<ul style="list-style-type: none"> Extent of coastal or maritime heath is stable or increasing. At least 2 different coastal or maritime heath NVC community types are present and support a range of characteristic plant species. Areas of heath form a mosaic with maritime grassland with patches of bare ground – no blanket heath cover. Pioneer heath plants are present. Grazing occurs annually at a level which prevents a long sward developing but does not suppress heather growth or flowering. A low sward height in grassland habitats and an open, varied structure in heath will be maintained within the cliff top habitats for feeding chough, without causing a decline in the extent or quality of the grassland and heathland. The coastal heath will comprise vegetation with <i>Ulex gallii</i> present and at least 30% ericoid cover, usually <i>Calluna vulgaris</i>, with at least one maritime indicator present such as <i>Armeria maritima</i>, <i>Plantago maritima</i>, <i>Plantago coronopus</i> or <i>Scilla verna</i>. Healthy populations of the rare vascular plants (including spotted rockrose, <i>Tuburaria guttata</i>, prostrate broom <i>Cytisus scoparius</i> subsp. <i>maritimus</i>, rock sea-lavender <i>Limonium britannicum</i> subsp. <i>pharense</i>, small adder's tongue, <i>Ophioglossum azoricum</i>, western clover, <i>Trifolium occidentale</i> and sharp rush <i>Juncus acutus</i>) will be present. Healthy populations of rare non-vascular plant species, including moss and liverwort species with restricted European distributions, and the soil-living lichens, ciliate strap-lichen <i>Heterodermia leucomela</i> and golden hair lichen <i>Teloschistes flavicans</i> will be present. Species indicative of rank or unmanaged conditions including European gorse, <i>Ulex europeaus</i>, bracken <i>Pteridium aquilinum</i>, foxglove <i>Digitalis purpurea</i>, ragwort species <i>Senecio</i> sp, dock <i>Rumex obtusifolius</i> and nettle <i>Urtica dioica</i> should be largely absent. Grass species indicative of improvement including creeping bent <i>Agrostis stolonifera</i>, cock's foot <i>Dactylus glomerata</i>, perennial rye-grass <i>Lolium perenne</i> and Yorkshire fog <i>Holcus lanatus</i> should be largely absent. Associated important species such as feeding chough (on the mainland and <i>Ynys Enlli</i>) and nesting Manx shearwater (on <i>Ynys Enlli</i>) are recorded in coastal or maritime heath areas. All factors affecting the achievement of these conditions, including grazing intensity and burning, will be under control. 	<p><u>Restriction of coastal erosion:</u></p> <p>This SAC is only present in part of PDZ 15 (PUs 15.1, 15.2 and 15.3) where the overarching policy is NAI.</p> <p>Localised policies within PDZ 15 include the managed retreat of the cliffs at Porth Dinllaen, therefore allowing for the cliffs to respond more naturally (under management) to sea level rise.</p> <p>The preferred policy options only result in a loss of cliff habitat within PUs 15.1 and 15.2. As the policy for 15.1 in NAI over the 3 epochs, the loss of cliff habitat will not be included in this assessment as it is a result of natural processes rather than the SMP2 policy.</p> <p>Within PU 15.2 as a result of HTL and MR there could be a reduction in natural succession of vegetated cliff habitat depending on the extent and location of in particular MR policy. HTL for epoch 1 would not noticeably affect natural succession given the existing management, however, MR could. The extent of habitat that could be lost is unknown but less than 0.1ha is predicted.</p> <p>Erosion of vegetated cliff will take place away from the very localised area of MR policy (only adjacent to the properties) and occurs as a result of natural processes.</p>	During MR ensure that vegetated cliff habitat is avoided.	As MR is likely to entail the relocation of properties or other alternative low impact actions, no adverse effect is anticipated.	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Corsydd Llyn/ Lleyn Fens SAC							
Alkaline fens	NA	<ul style="list-style-type: none"> Extent of alkaline fen habitat Habitat quality 	<ul style="list-style-type: none"> Alkaline fen occupies at least 7.1% of the total SAC area (i.e. 20.14ha) and occupies areas which have potential to support this habitat. Alkaline fen is found on all 4 component sites. The following plants are common in the alkaline fen: <i>Schoenus nigricans</i>, yellow starry feather moss <i>Campyllum stellatum</i>, great fen sedge <i>Cladium mariscus</i> (up to 1m tall), blunt flowered rush <i>Juncus subnodulosus</i>, sweet gale <i>Myrica gale</i>, moss <i>Drepanocladus revolvens</i>, bladderwort <i>Utricularia minor</i>, butterwort <i>Pinguicula vulgaris</i>. Species indicative of drainage or agricultural modification, such as yorkshire fog <i>Holcus lanatus</i>, bramble <i>Rubus</i> spp., nettle <i>Urtica dioica</i>, are largely absent from the alkaline fen. Purple moor grass <i>Molinia caerulea</i> does not exceed 25% of ground cover and is restricted to drier areas. Bare ground should constitute no more than about 5% of the ground cover (perhaps 10% on the wettest soligenous examples of alkaline fen). Alkaline Fen exhibits a diverse age and height structure across the site (tussocks are undamaged and 20% short grazed, 50% mature – 30% in between including bare ground). Scrub species such as willow <i>Salix</i> spp and birch <i>Betula pubescens</i> are largely absent from the alkaline fen. Invasive, non-native species are absent. Appropriate grazing is managed across 100% of the site. Standing or running surface water is present between tussocks throughout the year, and visible over 30% of the tussock covered area. All Hydrological (diffuse, surface and sub-surface) pathways (inputs and outputs) should be restored and/or intact (includes ditch infilling, blocking, diversion and re-engineering). Water quality is appropriate to the needs of the vegetation and species – namely base-rich but nutrient-poor. All factors affecting the achievement of these conditions are under control. 	<p><u>Erosion and Saline intrusion:</u></p> <p>The area of coast nearest the Lleyn Fens SAC has a preferred policy of NAI, therefore the natural erosion of the coast and alteration of hydrology would develop naturally and not as a direct result of the SMP. There do appear to be any obvious land constraints which would alter the integrity of this SAC or habitat of the Desmoulin's whorl snail <i>Vertigo moulinsiana</i> and the Geyer's whorl snail <i>Vertigo geyeri</i>.</p>	None required	No adverse effect expected	Yes
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	NA	<ul style="list-style-type: none"> Extent of calcareous fen habitat Habitat quality of open <i>Cladium</i> sward Habitat quality of <i>Cladium</i> dominated vegetation 	<ul style="list-style-type: none"> Calcareous fen occupies at least 3.8% (10.78ha) of <i>Cors Geirch</i>. The following plants are common in the Calcareous fen: Great fen sedge <i>Cladium mariscus</i>, blunt flowered rush <i>Juncus subnodulosus</i>, and sweet gale <i>Myrica gale</i>; bog-bean <i>Menyanthes trifoliata</i> marsh cinquefoil <i>Potentilla palustris</i>, bladderwort <i>Utricularia vulgaris</i> and slender sedge <i>Carex lasiocarpa</i>, are locally prominent. Species indicative of drainage or agricultural modification, such as yorkshire fog <i>Holcus lanatus</i>, bramble <i>Rubus</i> spp., nettle <i>Urtica dioica</i> are largely absent from the calcareous fen. Purple moor grass <i>Molinia caerulea</i> does not exceed 25% of ground cover. Calcareous Fen exhibits a diverse age and height structure across the site (20% short sward ?) Pure (monospecific) stands of single age and structure <i>Cladium mariscus</i> do not exceed 50% of the feature area. Scrub species such as willow <i>Salix</i> and birch <i>Betula</i> are largely absent from the calcareous fen. Non native invasive species are absent. Standing surface water is present over most of the winter period. Groundwater is within 15cm of surface in mid summer. All Hydrological (diffuse, surface and sub-surface) pathways (inputs and outputs) are restored and/or intact (includes ditch infilling, blocking, diversion and re-engineering). Water quality is appropriate to the needs of the vegetation – namely base-rich but nutrient poor. All factors affecting the achievement of these conditions are under control. 	<p>A total of 0.3ha of habitat could be lost to erosion from this SAC over all 3 epochs (epoch 1 = 0.02ha; epoch 2 = 0.2ha; epoch 3 = 0.06ha). However, any loss occurring to this interest feature is a result of natural processes.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 15.</p>			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Desmoulin`s whorl snail <i>Vertigo moulinsiana</i>	<ul style="list-style-type: none"> Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion <i>davalliana</i>. Alkaline fens. 	<ul style="list-style-type: none"> Extent of <i>Vertigo moulinsiana</i> Extent of suitable habitat Soil moisture content 	<ul style="list-style-type: none"> <i>Vertigo moulinsiana</i> is frequent in suitable habitat at Cors Geirch SSSI. Average height of vegetation is not less than 70cm when measured in August. Greater and lesser pond sedges, tussock sedge and saw sedge, branched burr-reed and yellow flag indicate favourable conditions, as can sparse <i>Phragmites</i> and <i>Phalaris</i>. Ground moisture levels at between damp and very wet. Prevent any significant rise in water levels such that aquatic plants (e.g. watercress <i>Rorippa nasturtium-aquaticum</i>, and fool's water cress <i>Apium nodiflorum</i>) become dominant. Light or rotational grazing or no grazing. No increase in scrub cover compared to the baseline. Avoid heavy grazing and poaching of banks. Prevent any decrease in water quality leading to eutrophication and changes in nutrient status. No increase in rank herbs (particularly nettle <i>Urtica dioica</i>, thistle <i>Cirsium</i> spp., meadowsweet <i>Filipendula ulmaria</i>, great willow-herb <i>Epilobium hirsutum</i> and butterbur <i>Petasites</i> spp.) with vegetation height increasing. 				
Geyer`s whorl snail <i>Vertigo geyeri</i>	<ul style="list-style-type: none"> Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion <i>davalliana</i>. Alkaline fens. 	<ul style="list-style-type: none"> Extent of <i>Vertigo geyeri</i> Extent of suitable habitat Habitat quality 	<ul style="list-style-type: none"> <i>Vertigo geyeri</i> is frequent in suitable habitat at Cors Geirch. There are abundant areas of flushed fen grassland (M13 / feature 2) with sedge/moss lawns 5- 15cm tall, containing species such as <i>Carex viridula</i> subsp. <i>brachyrrhyncha</i>, mosses <i>Drepanocladus revolvens</i>, <i>Campylium stellatum</i>, <i>Pinguicula vulgaris</i>, <i>Briza media</i>, <i>Equisetum palustre</i>, <i>Juncus articulatus</i> together with scattered tussocks of <i>Schoenus nigricans</i> no greater than 80cm tall. The ground supporting suitable habitat is saturated and there is a spring flow with a network of dendritic trickles. Light grazing of suitable habitat with ponies and/or cattle. 				

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 16: PDZ 16 – Trwyn Dylan to Llanfairfechan

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Afon Gwyrfaï a Llyn Cwellyn SAC							
Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	NA	<ul style="list-style-type: none"> Extent of Oligotrophic to mesotrophic standing waters Condition of Oligotrophic to mesotrophic standing waters 	<ul style="list-style-type: none"> Water quality of the lake is within parameters which are suitable to support the characteristic flora and fauna. The lake shows a characteristic vegetation zonation from the shore to the deeper water. The lake has a macrophyte flora which includes many of the characteristic species including <i>Littorella uniflora</i>, <i>Lobelia dortmanna</i>, <i>Isoetes lacustris</i>, <i>Luronium natans</i> and <i>Subularia aquatica</i>, together with a diverse range of associates including <i>Myriophyllum alterniflorum</i>, <i>Callitriche hamulata</i>, <i>Nitella flexilis</i> and <i>Potamogeton berchtoldii</i>. <i>Nitella gracilis</i> and <i>Luronium natans</i> to be present as characteristic plants. 	<p><u>Saline intrusion:</u></p> <p>The Llyn Cwellyn lies approximately 11km upstream of Foryd Bay. Given the topography in the area, saline intrusion on this feature of the SAC is extremely unlikely.</p> <p>It is considered that there will be no significant impact on the features of this SAC as a result of the preferred management options.</p>	None required	No adverse effect expected	Yes
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	NA	<ul style="list-style-type: none"> Distribution within catchment Typical species Plant community reproduction Bank and riparian zone vegetation Species indicative of eutrophication Alien/ introduced species 	<ul style="list-style-type: none"> The conservation objective for the water course as must be met. The extent of this feature within its potential range in this SAC should be stable or increasing. The extent of the sub-communities that are represented within this feature should be stable or increasing. The conservation status of the feature's typical species should be favourable. All known, controllable factors, affecting the achievement of these conditions are under control (many factors may be unknown or beyond human control). 	<p><u>Saline intrusion:</u></p> <p>Saline intrusion of the lower reaches of River Gwyrfaï will be likely over the 3 epochs. Within PU 16.5 as a whole (Foryd Bay) it is planned to HTL in epoch 1 with MR and NAI planned for epoch 2 and 3 respectively. The MR in epoch 2 would be aimed at alleviating the coastal squeeze within Foryd Bay and with NAI in epoch 3 potentially returning the Bay to a naturally functioning system.</p> <p>Saline intrusion of the lower reaches of the river is possible as a result of sea level rise and in response to the coastal squeeze, and not as a result of the SMP intentions or policies.</p> <p>It is considered that there will be no significant impact on the features of this SAC as a result of the preferred management options.</p>	None required	No adverse effect expected	Yes
Atlantic salmon <i>Salmo salar</i>	<ul style="list-style-type: none"> Water courses of plain to montane levels 	<ul style="list-style-type: none"> Adult run size Juvenile densities 	<ul style="list-style-type: none"> The conservation objective for the water course must be met. The population of the feature in the SAC is stable or increasing over the long term. The natural range of the feature in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches where predominantly suitable habitat for each life stage exists over the long term. Suitable habitat is defined in terms of near-natural hydrological and geomorphological processes and forms e.g. suitable flows to allow upstream migration, depth of water and substrate type at spawning sites, and ecosystem structure and functions. Suitable habitat need not be present throughout the SAC but where present must be secured for the foreseeable future. Natural factors such as waterfalls may limit the natural range of individual species. Existing artificial influences on natural range that cause an adverse effect on site integrity, such as physical barriers to migration, will be assessed. The Gwyrfaï will continue to be a sufficiently large habitat to maintain the feature's population in the SAC on a long-term basis. 	<p><u>Obstruction:</u></p> <p>The Afon Gwyrfaï in north-west Wales is representative of the small montane rivers in this region. It contains a largely unexploited salmon population with a characteristically late run. Environment Agency electrofishing data indicates the presence of healthy juvenile populations downstream of Llyn Cwellyn.</p> <p>A change in coastal processes or coastal squeeze could potentially lead to an obstacle within the river as a result of sediment deposition which will hinder fish migration, or saline intrusion will change the extent of available habitat and will alter spawning sites.</p> <p>No obstructions will occur that will reduce access to the habitats for these species, as a result of the SMP policies in this PDZ.</p> <p>It is considered that there will be no significant impact on the features of this SAC as a result of the preferred management options.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Floating water-plantain <i>Luronium natans</i>	<ul style="list-style-type: none"> Oligotrophic to mesotrophic standing waters 	<ul style="list-style-type: none"> Species extent and abundance Sufficient habitat 	<ul style="list-style-type: none"> The conservation objective for the water course must be met. Llyn Cwellyn will continue to support a peripheral floating water-plantain assemblage, as well as a deeper water assemblage, with a characteristic zonation of vegetation from the shore at two areas of the lake. Floating water-plantain will continue to flourish in the Afon Gwyrfa and will continue to occur in every selected section. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>The diversity of growth forms and their range across the Cwellyn-Gwyrfa makes this an internationally significant site for the species.</p> <p>Saline intrusion of the lower reaches of the river is possible as a result of sea level rise and in response to the coastal squeeze, however the extent of intrusion and location of the floating water-plantain populations would not be affected.</p> <p>It is considered that there will be no significant impact on the features of this SAC as a result of the preferred management options.</p>	None required	No adverse effect expected	Yes
Otter <i>Lutra lutra</i>	<ul style="list-style-type: none"> Water courses of plain to montane levels 	<ul style="list-style-type: none"> Population distribution Breeding activity Actual and potential breeding sites 	<ul style="list-style-type: none"> The population of otters in the SAC is stable or increasing over the long term and reflects the natural carrying capacity of the habitat within the SAC, as determined by natural levels of prey abundance and associated territorial behaviour. The natural range of otters in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. The natural range is taken to mean those reaches that are potentially suitable to form part of a breeding territory and/or provide routes between breeding territories. The size of breeding territories may vary depending on prey abundance. The population size should not be limited by the availability of suitable undisturbed breeding sites. Where these are insufficient they should be created through habitat enhancement and where necessary the provision of artificial holts. No other breeding site is subject to a level of disturbance that could have an adverse effect on breeding success. Where necessary, potentially harmful levels of disturbance are managed. The safe movement and dispersal of individuals around the SAC is facilitated by the provision, where necessary, of suitable riparian habitat, and underpasses, ledges, fencing etc at road bridges and other artificial barriers. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>Saline intrusion of the lower reaches of the river is possible as a result of sea level rise and in response to the coastal squeeze, and not as a result of the SMP intentions or policies.</p> <p>Overall, the area of the river will not be reduced as a result of the SMP2 policies; therefore maintaining the otters food resources.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Y Twyni o Abermenai Aberffraw/ Abermenai to Aberffraw Dunes SAC							
Embryonic shifting dunes	NA	<ul style="list-style-type: none"> Extent Quality 	<ul style="list-style-type: none"> The distribution and extent of embryonic shifting dunes in late summer is determined by the availability of naturally accreting sand and strand line organic material. However, we would not expect all this potential embryonic dune habitat area to be vegetated in any one year and embryonic dunes may be absent in some years. Continuous absence over the six-year reporting cycle would cause the condition to be considered unfavourable. The potential for the embryonic shifting dunes element of the typical zonation, from beach to fixed dune, is intact along the soft coastal frontage. This includes an unrestricted supply of sediment, opportunity for aeolian transport and naturally occurring organic strandline material. The typical species of the strandline vegetation include <i>Atriplex</i> spp., <i>Beta vulgaris</i>, <i>Cakile maritime</i>, <i>Honkenya peploides</i>, <i>Salsola kali</i>. The typical species of the embryonic dune vegetation include <i>Elytrigia juncea</i> and /or <i>Leymus arenarius</i>. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Abermenai to Aberffraw Dunes is one of two sites selected to represent Embryonic shifting dunes in north Wales. Embryonic dunes form a zone across a broad part of the beach/dune interface, making this site one of the most extensive examples of this habitat type in the UK. It is a site where, in contrast to some others in north Wales, recreational damage is minimal.</p> <p>Areas of sand dune with particular contact with the coastal processes are located within Llanddwyn Bay (PU 16.7), Morfa Dinlle (PU 16.4), Foryd Bay (16.5) and marginally in the Cefni Estuary (PU 16.10). The bordering saltmarsh community will reduce the loss of sand dunes and all areas are subject to a NAI policy, with the exception of PUs 16.4 (MR/MR/NAI) and 16.5 (HTL/MR/NAI), which will allow the sand dunes and saltmarshes to respond naturally to sea level rise.</p> <p>The MR policy in epochs 1 and 2 for PU 16.4 would consist of measures rather than hard defences) to sustain dune development and function, thereby sustaining dune development, as the MR policy enables the dunes to develop naturally.</p> <p>The HTL policy in PU 16.5 would not comprise hard defences along the entire frontage but would entail management of the eastern and southeastern site boundary which does not contribute to dune function, and they would not therefore reduce dune development on the western face. However, the HTL could potentially inhibit the landward movement of the western dune extent comprising fixed dunes.</p> <p>Overall, the policies are not expected to result in any deterioration of dune processes and features within the Site.</p>	None required	No adverse effect expected	Yes
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')	NA	<ul style="list-style-type: none"> Extent Quality 	<ul style="list-style-type: none"> Shifting dunes with <i>Ammophila arenaria</i> are present along the dune front facing prevailing (southwest) winds where sediment supply is adequate. There should be no decrease in the total (aggregate) area of qualifying dune habitats for which this site was designated (ie the sum total of qualifying dune habitat should not diminish). The extent and location of individual dune habitat features may be subject to periodic and seasonal variation. The shifting dunes element of the typical zonation from beach to fixed dune is intact along the soft coastal frontage. Bare ground is present. The typical species of the shifting dune vegetation include <i>Ammophila arenaria</i>, <i>Leymus arenarius</i>, <i>Elymus farctus</i>, <i>Eryngium maritimum</i>, <i>Euphorbia portlandica</i>, <i>Euphorbia paralias</i>, and <i>Calystegia soldanella</i>. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Abermenai to Aberffraw Dunes is one of two sites selected in north Wales. It contains one of the largest areas of lyme-grass <i>Leymus arenarius</i> shifting dune community in Wales. The mobile dunes at the southern end of the site support an abundance of sea-holly <i>Eryngium maritimum</i>, and there is well-developed zonation of dune types, including both seaward transitions between mobile dune and foredune, and landward transitions to fixed dune and dune slack.</p> <p>See <i>Embryonic shifting dunes for habitat loss details</i>.</p>			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Fixed dunes with herbaceous vegetation ('grey dunes')	NA	<ul style="list-style-type: none"> Extent Quality 	<ul style="list-style-type: none"> The distribution of fixed dunes within the site may vary in response to natural dynamic processes and changes to other qualifying dune habitats for the site. There should be no decrease in the total area of fixed dunes with herbaceous vegetation. The fixed dunes element of the typical zonation from beach to fixed dune is intact along the soft coastal frontage. Bare ground is present The typical species of the fixed dune vegetation include <i>Cerastium fontanum</i>, <i>Crepis capillaris</i>, <i>Cladonia</i> spp., <i>Peltigera</i> spp., <i>Erodium cicutarium</i>, <i>Geranium molle</i>, <i>Luzula campestris</i>, <i>Odontites verna</i>, <i>Pilosella officinarum</i>, <i>Plantago lanceolata</i>, <i>Prunella vulgaris</i>, <i>Festuca rubra</i>, <i>Galium verum</i>, <i>Anacamptis pyramidalis</i>, <i>Thymus polytrichus</i>, <i>Sedum acre</i>, <i>Veronica chamaedrys</i>, <i>Carex arenaria</i>, <i>C. flacca</i>, <i>Euphrasia officinalis</i>, <i>Hypnum cupressiforme</i>, <i>Hypochaeris radicata</i>, <i>Linum catharticum</i>, <i>Lotus corniculatus</i>, <i>Ononis repens</i>, <i>Rhinanthus minor</i>, <i>Rhytidadelphus squarrosus</i>, <i>R. triquetrus</i>, <i>Tortula muralis</i> <i>Viola canina</i>, <i>V. riviniana</i> and <i>V. tricolor</i>. All factors affecting the achievement of these conditions are under control 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Within this dune complex in north Wales are extensive areas of both fixed dune vegetation with red fescue <i>Festuca rubra</i> and lady's bedstraw <i>Galium verum</i> and semi-fixed dune grassland with marram <i>Ammophila arenaria</i> and red fescue. Despite the fact that a large proportion of the open vegetation has been afforested, the remaining communities retain considerable interest. Notable species of the site include early sand-grass <i>Mibora minima</i>. On the south side of Menai Strait, the dunes at Morfa Dinlle include a lichen-rich community with <i>Coelocaulon aculeatum</i> (SD11), a type of vegetation which is very rare in Wales.</p> <p><i>See Embryonic shifting dunes for habitat loss details.</i></p>			
Dunes with <i>Salix repens ssp. argentea</i> (<i>Salicion arenariae</i>)	NA	<ul style="list-style-type: none"> Extent Quality 	<ul style="list-style-type: none"> The distribution of dunes with <i>Salix repens ssp argentea</i> is consistent with the typical dune zonation and where topographic conditions are suitable. The location of dunes with <i>Salix repens ssp argentea</i> within the site may vary in response to natural dynamic processes and changes to other qualifying dune habitats for the site There should be no decrease in the total (aggregate) area of qualifying dune habitats for which this site was designated (i.e., the sum total of qualifying dune habitat should not diminish). The extent of individual dune habitat features may be subject to periodic and seasonal variation. <i>Salix repens</i> is at least frequent and generally 5 - 30cm tall. Opportunities for the initiation of embryonic dune slacks by wind erosion exist. Bare ground is present. The groundwater level is appropriate in winter and summer. Groundwater quality is unaffected by pollution. The typical species include <i>Salix repens</i>, <i>Carex arenaria</i>, <i>C flacca</i>, <i>Euphrasia officinalis</i>, <i>Festuca rubra</i>, <i>Lotus corniculatus</i>, <i>Ononis repens</i>, <i>Equisetum variegatum</i>, <i>Epipactis palustris</i>, <i>Epipactis leptochila ssp dunensis</i> and <i>Pilosella officinarum</i>. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Abermenai to Aberffraw Dunes in north Wales comprises an extensive area of dunes with a complete range of dune vegetation, including substantial areas of slack vegetation dominated by creeping willow <i>Salix repens ssp. argentea</i>. Despite the extent of afforestation, the dune aquifer retains its overall integrity, although changes in water table, partly attributable to the growth of the forest, have influenced the development of the dune slacks. There is long-term potential for further improvement.</p> <p><i>See Embryonic shifting dunes for habitat loss details.</i></p>			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Humid dune slacks	NA	<ul style="list-style-type: none"> Quality 	<ul style="list-style-type: none"> The distribution of humid dune slacks is consistent with the typical dune zonation and where topographical conditions are suitable. The location of humid dune slacks within the site may vary in response to natural dynamic processes and changes to other qualifying dune habitats for the site. There should be no decrease in the total (aggregate) area of qualifying dune habitats for which this site was designated (i.e., the sum total of qualifying dune habitat should not diminish). The extent and location of individual dune habitat features may be subject to periodic and seasonal variation. All humid dune slack communities should be present, from embryonic dune slacks with a high % of bare ground to more closed vegetation with <i>Salix repens</i>. Opportunities for the initiation of embryonic dune slacks (by wind erosion) exist. Bare ground is present. The ground water level is appropriate in winter and summer. Ground water quality is unaffected by pollution. The typical species include <i>Salix repens</i>, <i>Carex arenaria</i>, <i>C. flacca</i>, <i>Equisetum variegatum</i>, <i>Lotus corniculatus</i>, <i>Ononis repens</i>, <i>Potentilla anserina</i>, <i>Galium palustre</i>, <i>Mentha aquatica</i>, <i>Hydrocotyle vulgaris</i>, <i>Campyllum stellatum</i>, <i>Prunella vulgaris</i>, <i>Ranunculus flammula</i>, <i>Calliergon cuspidatum</i>, <i>Anagallis tenella</i>, <i>Parnassia palustris</i>, <i>Selaginella selaginoides</i>, <i>Dactylorhiza incarnata</i> and <i>Epipactis palustris</i>. Petalwort occurs in humid dune slacks in which <i>Equisetum variegatum</i> is frequent at Aberffraw and Newborough compartments. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Abermenai to Aberffraw Dunes represents Humid dune slacks in north Wales. There are large areas of open dune vegetation and many humid dune slacks remain, although there have been changes in the water table that are partly attributable to the growth of the commercial forest. The changes have influenced the development of humid dune slacks, which nonetheless retain most the essential features of the habitat type.</p> <p><i>See Embryonic shifting dunes for habitat loss details.</i></p>			
Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation	NA	<ul style="list-style-type: none"> Extent of habitat Condition of feature Presence of alien invasive species 	<ul style="list-style-type: none"> The distribution of the lakes reflects their physiographic status as dune-dammed lakes of shallow valleys. The extent (area) of the habitat is 30ha, except if reduced by natural succession to swamp or bog. The catchment of the lakes continues to provide adequate quality and quantity of water. Appropriate water level is maintained throughout the year, (seasonal fluctuation +/- 30cm). Water quality is characteristic of maritime, high alkalinity shallow lakes, such as to maintain pH 7-9, alkalinity 1500-2500µeq/l, dissolved oxygen and peak annual Total Phosphorus <50µg/l. Chlorophyll α values are low, and sufficient to allow both lakes to be passed as 'Good' or better for a 'high alkalinity shallow lake' using Water Framework Directive classification methods. The typical species are submerged aquatic plants including <i>Elatine hydropiper</i>, <i>Potamogeton trichoides</i>, <i>P. pectinatus</i> P. <i>perfoliatus</i> P. <i>lucens</i>, <i>Ranunculus circinatus</i>, <i>Eleocharis acicularis</i>, <i>Myriophyllum spicatum</i>, <i>Callitriche hermaphroditica</i>, and <i>Chara</i> spp.. Emergent aquatic plants, typically <i>Phragmites australis</i>, <i>Schoenoplectus lacustris</i>, <i>Sparganium erectum</i>, <i>Typha latifolia</i>, <i>Alisma plantago-aquatica</i>, and <i>Litorella uniflora</i> should be present on the shoreline. Invasive or disruptive species such as <i>Crassula helmsii</i> or coarse fish should be absent. All factors affecting the achievement of these conditions are under control. 	Not present in PDZ16.			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Petalwort <i>Petalophyllum ralfsii</i>	Humid Dune Slacks	<ul style="list-style-type: none"> Extent of feature Condition of habitat 	<ul style="list-style-type: none"> The population of petalwort is stable or increasing. Petalwort occurs in humid dune slacks in which <i>Equisetum variegatum</i> is frequent, across all sectors of the site where habitat conditions are suitable, i.e. Aberffraw and Newborough compartments. Humid dune slack with bare sand or humus crust and short vegetation characterised by <i>Equisetum variegatum</i> is present at Aberffraw and Newborough compartments where sediment and hydrological conditions permit. (see objective for humid dune slacks). Competition (including shading) from other species is controlled. All factors affecting the achievement of these conditions are under control. 	<p>Abermenai to Aberffraw Dunes is an extensive complex of sand dunes, dune slacks, marsh, shingle and cliffs in south-west Anglesey, north Wales. There is a large population of petalwort <i>Petalophyllum ralfsii</i> here that was first recorded in 1828. This historical continuity indicates that the site is especially favourable for the survival of this species. Although partly afforested, the open dunes have a very rich bryophyte flora, including the mosses <i>Amblyodon dealbatus</i>, <i>Catoscopium nigratum</i> and the liverwort <i>Southbya tophacea</i>, particularly in damp, calcareous slacks and flats.</p> <p><i>See Embryonic shifting dunes for habitat loss details.</i></p>			
Shore dock <i>Rumex rupestris</i>	Humid Dune slacks	<ul style="list-style-type: none"> Presence / absence Number of individuals Vegetation structure 	<ul style="list-style-type: none"> The population of shore dock is stable or increasing. Shore dock occurs in at least 3 locations across the site. Opportunities occur for marine dispersal of seed. Open streamside, coastal soft cliff seepages or dune slack pool habitat is adequate for its survival. Adequate freshwater supply is maintained. Bare ground or disturbed areas are maintained (e.g. by grazing animals) to permit germination. Competition (including shading) from other species is controlled. All factors affecting the achievement of these conditions are under control. 	<p>Abermenai to Aberffraw Dunes in north Wales is important as it represents shore dock <i>Rumex rupestris</i> at the far north-west of its geographical range. It is remote from other known sites for this species, and shore dock occurs in an unusual situation: along a small stream bed and on damp pond edges, formerly in duneland, now in a clearing in a conifer plantation. There are two small colonies, which held 21 flowering plants in 1994, 26 in 1995 and 53 in 1996.</p> <p><i>See Embryonic shifting dunes for habitat loss details.</i></p>			

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh SAC							
Estuaries	NA	<ul style="list-style-type: none"> Extent Spatial distribution of estuarine communities 	<ul style="list-style-type: none"> The distribution and extent of the estuaries, and their encompassed habitats, are determined predominantly by natural structure and environmental processes. The natural habitat structures necessary for the long-term maintenance of the estuaries and their encompassed habitats and typical species are maintained. The granulometry and structure of the estuaries' sediments, and their natural variation, distribution and extent, are determined predominantly by natural sediment supply and transport processes. The quality of habitat structure is no more degraded as a consequence of human action or by materials of anthropogenic origin. The natural environmental processes necessary for the long-term maintenance of the estuaries, their encompassed habitats and their typical species are maintained. Water & sediment chemistry are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. The salinity regime and gradients within the estuaries are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. Typical species are determined predominantly by inherent population dynamics and ecological processes. The species richness, population dynamics, abundance, biomass, population structures, physiological health, reproductive capacity, recruitment, range and mobility are maintained. The management of activities or operations likely to degrade the distribution, extent, structure, function or typical species populations of the feature, is appropriate for maintaining favourable conservation status and is secure in the long-term. The management of existing commercial fisheries for typical species ensures that species exploitation is at or below maximum sustainable yield and is secure in the long-term. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>The Cefni estuary is located within PUs 16.8, 16.9 and 16.10 and comprises sandflat/mudflat and saltmarsh. The NAI policy at the mouth of the estuary (PU 16.8 and 16.10) and outer estuary will allow the estuary to respond naturally to sea level rise and any habitat lost will be a result of natural processes. The HTL policy in the inner estuary (PU 16.9; embankment and village) will potentially result in loss of saltmarsh and sandflat/mudflat habitat through coastal squeeze.</p> <p>The existing defence in PU 16.9 comprises a stone pitched embankment on the east bank of the river. The undefended bank on the west bank will allow the estuary to function more naturally.</p> <p>Although the direct loss of estuary habitat is unlikely, it is likely that there will be an alteration of extent of different estuary habitats, however an overall balance within the estuary will be maintained.</p> <p>The Braint Estuary is located within PU 16.6 and is subject to a preferred policy of NAI which would allow the estuary to naturally respond to sea level rise.</p> <p>Over time, regular tidal flooding will occur and may see the extent of the estuary move inland, though inundation confined by coastal topography. Estuary feature maintained.</p> <p>Within PU 16.6 any habitat lost will be as a result of natural processes and not as a result of the SMP policy.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
<p><i>Salicornia</i> and other annuals colonising mud and sand</p>	<p>NA</p>	<ul style="list-style-type: none"> • Extent • Distribution • Condition • Distribution and extent of common cordgrass <i>Spartina anglica</i> community SM6 within the pioneer saltmarsh zone 	<ul style="list-style-type: none"> • The distribution and extent of <i>Salicornia</i> and other annuals is determined predominantly by natural structure and environmental processes. • The natural habitat structures necessary for the long-term maintenance of <i>Salicornia</i> and other annuals and their typical species are maintained. • The granulometry and structure of <i>Salicornia</i> and other annuals' sediments, and their natural variation, distribution and extent, are determined predominantly by natural sediment supply and transport processes. • The geomorphology of the <i>Salicornia</i> and other annuals feature, and its natural variation, distribution and extent, are determined predominantly by the underlying geology and natural environmental processes. • The natural environmental processes necessary for the long-term maintenance of the <i>Salicornia</i> and other annuals feature and its typical species, are maintained. • The hydrographic and meteorological processes necessary for the long-term maintenance of the <i>Salicornia</i> and other annuals feature and its typical species are determined predominantly by natural environmental processes. • The salinity regime and gradients of the <i>Salicornia</i> and other annuals feature are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. • Nutrients in the water column and sediments remain within ranges that are not potentially detrimental to the long-term maintenance of the <i>Salicornia</i> and other annuals' communities, their distribution and range. • Contaminants in the water column and sediments derived from human activity remain below levels potentially detrimental to the long-term maintenance of the <i>Salicornia</i> and other annuals' communities, their distribution and range. • Dissolved oxygen levels in the water column and sediments are determined predominantly by natural environmental processes. • Communities of typical species are maintaining their conservation status on a long-term basis as viable components of the <i>Salicornia</i> and other annuals' habitats the management of activities or operations likely to degrade the distribution, extent, structure, function or typical species communities of the feature, is appropriate for maintaining favourable conservation status and is secure in the long-term. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>This is part of a complex of saltmarsh and dune habitats lying either side of the dune systems at Newborough Warren, north Wales. It is therefore important in terms of the structural integrity of the site, which has been selected primarily for a range of sand dune Annex I types. The most significant stands of <i>Salicornia</i> spp. saltmarsh occur on Mallaeth Sands in the Cefni estuary.</p> <p>This SAC features, occurs within PUs 16.6 (NAI), 16.7 (NAI), 16.8 (NAI), 16.9 (HTL) and 16.10 (NAI).</p> <p>NAI is the preferred policy at the mouth of the estuary (PU 16.8 and 16.10) and at PUs 16.6 and 16.7. The NAI policy will allow the intertidal habitats to function naturally, and will allow the saltmarsh to migrate backwards as the sandflats continue to move landwards in response to sea level rise. As both the sandflat and saltmarsh habitat are able to migrate landward, there will be no loss of habitat as a result of the SMP2 policy. Any habitat loss within these PUs will be a result of natural processes.</p> <p>The HTL policy in the inner estuary (16.9; embankment and village) where defences are already in place could result in the development of lower margins of saltmarsh habitat into mudflat, however the presence of defences would cause coastal squeeze resulting in intertidal habitat (including saltmarsh) loss through the inability to migrate landwards subject to coastal squeeze.</p> <p>The main area of saltmarsh seems to be to the southern flank of the estuary (NAI), however, despite no habitat loss recorded there could be potential minor loss to fringe habitat along the northern section of the estuary, though it is expected that this would occur at the expense of intertidal mudflat.</p> <p>Habitat loss calculations have concluded that there will be no loss of sandflat or saltmarsh habitat in PU 16.9 as a result of the SMP2 HTL policy.</p> <p><i>Any loss occurring to this interest feature where policy is NAI is a result of natural processes.</i></p>	<p>None required</p>	<p>No adverse effect expected</p>	<p>Yes</p>

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mudflats and sandflats not covered by seawater at low tide	NA	<ul style="list-style-type: none"> • Extent • Distribution of biotopes • Community composition • Extent of notable biotopes • Species composition of notable biotopes 	<ul style="list-style-type: none"> • The distribution and extent of the mudflats and sandflats, and their encompassed habitat, are determined predominantly by natural structure and environmental processes. • The natural habitat structures necessary for the long-term maintenance of the mudflats and sandflats, and their encompassed habitat and typical species are maintained. • The granulometry and structure of the mudflats and sandflats' sediments, and their natural variation, distribution and extent, are determined predominantly by natural sediment supply and transport processes. • The quality of habitat structure is no more degraded as a consequence of human action or by materials of anthropogenic origin. • The natural environmental processes necessary for the long-term maintenance of the mudflats and sandflats, their encompassed habitats and their typical species are maintained. • Water & sediment chemistry are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. • The salinity regime and gradients within the mudflats and sandflats are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. • Typical species are determined predominantly by inherent population dynamics and ecological Processes the species richness, population dynamics, abundance, biomass, population structures, physiological health, reproductive capacity, recruitment, range and mobility are maintained. • The management of activities or operations likely to degrade the distribution, extent, structure, function or typical species populations of the feature, is appropriate for maintaining favourable conservation status and is secure in the long-term. • The management of existing commercial fisheries for typical species ensures that species exploitation is at or below maximum sustainable yield and is secure in the long-term. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>The HTL policy in the inner estuary (16.9; embankment and village) where defences are already in place could result in the reduction in intertidal mudflat habitat due to the constraint imposed on the defences, with areas of mudflat being colonised by saltmarsh, whereas lower areas of estuarine mud would become subtidal. Overall, up to 7.11ha of mudflat could be lost throughout all epochs, with 3.3ha in epoch 2, and 3.65ha in epoch 3.</p>	None identified	An adverse effect due to the reduction in the extent of the interest feature is expected	No

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Atlantic salt meadow (ASM)	NA	<ul style="list-style-type: none"> Extent of Atlantic salt meadow Condition of ASM Creek system and salt pan pattern Zonation of vegetation Sward structure 	<ul style="list-style-type: none"> The distribution and extent of the salt meadows is determined predominantly by natural structure and environmental processes. The natural habitat structures necessary for the long-term maintenance of the salt meadows and typical species are maintained. The granulometry and structure of the salt meadows' sediments, and their natural variation, distribution and extent, are determined predominantly by natural sediment supply and transport processes. The geomorphology of the salt meadows, and their natural variation, distribution and extent, are determined predominantly by the underlying geology and natural environmental processes. The hydrographic and meteorological processes necessary for the long-term maintenance of the salt meadows and their typical species are determined predominantly by natural environmental processes. The salinity regime and gradients within the salt meadows are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. Nutrients in the water column and sediments are within ranges that are not potentially detrimental to the long-term maintenance of the salt meadows' communities, their distribution and range. Contaminants in the water column and sediments derived from human activity remain below levels potentially detrimental to the long-term maintenance of the salt meadows' communities, their distribution and range. Dissolved oxygen levels in the water column and sediments are determined predominantly by natural environmental processes; The zonation of saltmarsh from pioneer, lower mid marsh and upper mid marsh and their transitions to fresh water and terrestrial vegetation are maintained. Communities of typical species are maintaining their conservation status on a long-term basis as viable components of the salt meadows' habitats. The species richness, community dynamics, abundance, biomass, community structures, physiological health, reproductive capacity, recruitment and range are maintained. The management of activities or operations likely to degrade the distribution, extent, structure, function or typical species communities of the feature, is appropriate for maintaining favourable conservation status and is secure in the long-term. 	See above in <i>Salicornia</i> and other annuals colonising mud and sand	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> Range. Structure and function. Typical species. 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing.</p> <p>For the intertidal mudflats and sandflats feature these include;</p> <ul style="list-style-type: none"> Muddy gravel communities Dwarf eelgrass, <i>Zostera noltei</i> beds Sediment communities at Traeth Lafan <p>For the reef feature these include;</p> <ul style="list-style-type: none"> Reef communities in high energy wave-sheltered, tide-swept conditions Under-boulder, overhang and crevice communities Limestone reef communities Clay outcrop reef communities <p>For the large shallow bay feature these include;</p> <ul style="list-style-type: none"> Organically enriched muddy sediment areas <p><u>Structure and Function</u> The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include;</p> <ul style="list-style-type: none"> geology, sedimentology, geomorphology, hydrography and meteorology, water and sediment chemistry, biological interactions. <p>This includes a need for nutrient levels in the water column and sediments to be at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. Restoration and recovery <p>This includes the need for restoration of some reef features such as underboulder, overhang and crevice communities, and of some mudflat and sandflat features such as the muddy gravel habitats and sheltered muddy habitats. All of these habitats are also part of the large inlets and bays feature.</p> <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> species richness population structure and dynamics, physiological health, reproductive capacity recruitment, mobility range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>The Site includes the Four Fathom Banks complex, which is a relatively rare type of subtidal sandbank in Wales, in that it is comparatively large, and is fairly sheltered from wave action but situated in an area of open coast. The sandbanks vary from stable muddy sands in areas that experience weak tidal streams to relatively clean well-sorted and rippled sand in the outer area of the bank where tidal streams are stronger. In very shallow waters, particularly in the inner shore areas, relatively species-rich sandy communities are dominated by polychaetes such as <i>Spio filicornis</i>. In some years when numbers of bivalves are high, internationally important flocks of common scoter <i>Melanitta nigra</i> have been observed to congregate in the area of the Four Fathom Banks complex to feed.</p> <p>NAI policies within PUs 16.6, 16.13, 16.15, 16.16, 16.18, 16.20, 16.23, 16.25, 16.26, 16.30 and 16.31 will allow the actively eroding foreshore to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease, however the condition of the sandbanks may change if eroding material is continually deposited in the area – either changing the sediment type, or raising/lowering the sandbanks; however, this will be a result of the natural processes and not a result of the SMP2 policies.</p> <p>A HTL in the PUs listed below will allow the subtidal sandbanks to respond to sea level rise at the expense/loss of the intertidal habitats. Intertidal habitat could be lost where it is unable to move landward as the extent of subtidal habitat will increase – either as a result of being covered by seawater, or through the deposition of sediment onto the existing subtidal habitats.</p> <p>16.5 = HTL/MR/NAI 16.11 = HTL/HTL/MR 16.12 = HTL/HTL/HTL 16.14 = HTL/HTL/HTL 16.17 = HTL/MR/NAI 16.19 = HTL/HTL/HTL 16.21 = HTL/HTL/MR 16.22 = HTL/HTL/MR 16.24 = HTL/HTL/HTL 16.27 = HTL/HTL/HTL 16.28 = HTL/HTL/MR 16.29 = HTL/HTL/HTL 16.33 = HTL/HTL/MR</p> <p>MR in the long term (as listed above) would ensure that coastal squeeze would not be an issue to the intertidal habitat and will ensure that subtidal sandbanks do not significantly increase in extent at the expense of the intertidal habitat.</p> <p>Overall it is concluded that the subtidal sandbanks will be able to respond to the changing conditions and will not be adversely impact by the SMP2 policies. There is a risk that eroded material will be lost if there is a significant change in the coastal processes of the area, and monitoring should be carried out in the future to determine whether an impact has occurred.</p>	<p>Future monitoring of the subtidal sandbanks to determine to what extent the coastal processes may have changed and whether this has impacted on the extent of the subtidal sandbanks.</p>	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mudflats and sandflats not covered by sea water at low tide	NA		<p>long term</p> <ul style="list-style-type: none"> the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>The intertidal mudflats and sandflats include Traeth Lafan, the shores of the Menai Strait, and the Foryd estuary. Traeth Lafan is an example of an almost fully marine extensive mud and sandflat that experiences a broad range of wave exposure, providing a range of sediment types with typical associated communities. For example, the shrimps <i>Haustorius arenarius</i> and <i>Bathyporeia sarsi</i> are found in mobile clean sand, whilst bivalves such as the cockle <i>Cerastoderma edule</i>, the gaper <i>Mya arenaria</i> and Baltic tellin <i>Macoma balthica</i> are common in more sheltered fine and muddy sand. The sand-mason worm <i>Lanice conchilega</i> is found in more tide-swept areas. The mixed sediment shores between Beaumaris and Lleiniog are highly productive shores that are rich in animal and plant species. These shores include a nationally important biotope that is rare in the UK. The nationally scarce dwarf eelgrass <i>Zostera noltei</i> is also found at this site.</p> <p>The majority of the coastline within this site comprises mudflat or sandflat. However, the extent of the SAC does not include all intertidal sand/mudflats within PDZ 16.</p> <p>The following PUs contain sandflats/mudflats that fall within the SAC boundary:</p> <p>16.5 = HTL/MR/NAI (sandflat and saltmarsh) 16.6 = NAI/NAI/NAI (sandflat) 16.9 = HTL/HTL/HTL (mudflat) 16.12 = HTL/HTL/HTL (mudflat and sandflat) 16.13 = NAI/NAI/NAI (mudflat and shingle) 16.17 = HTL/MR/NAI (sandflat) 16.18 = NAI/NAI/NAI (mudflat) 16.24 = HTL/HTL/HTL (mudflat) 16.25 = NAI/NAI/NAI (sandflat) 16.30 = NAI/NAI/NAI (mudflat) 16.31 = NAI/NAI/NAI (sandflat) 16.33 = HTL/HTL/MR (sandflat)</p> <p>The loss of habitat within PUs 16.6, 16.13, 16.18, 16.25, 16.30 and 16.31 will be a result of natural processes and not as a result of the SMP2 policies.</p> <p>HTL policy in PU 16.5, part of 16.11, and 16.33 will result in a loss of intertidal habitat as the sandflats/mudflats are constrained as sea levels rise. Approximately 1.21ha of intertidal sandflat could be lost as a result of HTL for PUs 16.5, 16.11, and 16.33 in epoch 1, whilst in epoch 2 up to 3.87ha could be lost as a result of HTL for PUs 16.11 and 16.33.</p> <p>HTL in PUs 16.12, 16.14, 16.17, 16.19, 16.21, 16.22, 16.24, 16.27, 16.28, and 16.29 though resulting in constraint to intertidal habitat will not adversely affect the site feature as they would affect intertidal habitat outside the Site boundary.</p> <p>The NAI policy in epoch 3 for PUs 16.5 and 16.17 will enable the intertidal habitat to respond naturally to the sea level rise – therefore any of loss of habitat in epoch 3 from these PUs will be a result of natural processes and not the SMP2 policy.</p>	<p>Potentially move defences landward were feasible at a local level to allow intertidal habitat to roll back in line with sea level rise, reducing the extent of site feature affected.</p>	<p>The loss of up to 13.57ha of intertidal mudflat and sandflat feature would result in an adverse effect.</p>	No
Reefs	NA			<p><u>Coastal squeeze / Coastal processes:</u></p>	None required	No adverse effect	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
				<p>The reefs of the Menai Strait and Conwy Bay between mainland Wales and Anglesey include the tidal rapids of the Menai Strait, and limestone reefs along the south-east Anglesey coast and around Puffin Island and the Great and Little Ormes. The environmental conditions of the Menai Strait are unusual. The water is relatively turbid, containing a relatively high level of suspended material, and although the area is largely sheltered from wave action tidal streams are strong, reaching up to 8 knots (4m/s⁻¹) in places during spring tides. As a result, the rocky reefs of the Strait are dominated by a diverse and unusual mixture of animals that feed mainly by filtering their food from the seawater.</p> <p>Bedrock reefs are primarily located within PUs 16.14, 16.15, 16.16, 16.18 and 16.26 where the policy option are:</p> <p>16.14 = HTL/HTL/HTL 16.15 = NAI/NAI/NAI 16.16 = NAI/NAI/NAI 16.18 = NAI/NAI/NAI 16.26 = NAI/NAI/NAI</p> <p>NAI policies will allow the intertidal sand and mudflats to continue to supply sediment to the subtidal reefs and supply sediment to the upper foreshore therefore allowing both the subtidal and intertidal reefs to maintain their extent.</p> <p>A HTL at PU 16.14 will cause habitat loss of the intertidal area in the long term as sea levels rise and the shore is squeezed, however, the intertidal is outside the Site boundary and consequently the nearshore reef features would not be expected to decrease in potential habitat area.</p> <p>No data was available to quantify the loss of this particular interest feature.</p>		on integrity of reef features	

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Traeth Lafan / Lavan Sands, Conway Bay SPA							
Internationally important Article 4.2 Species (wintering): Oystercatcher <i>Haematopus ostralegus</i> , curlew <i>Numenius arquata</i>	Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	<ul style="list-style-type: none"> Number of wintering oystercatchers The extent of intertidal flats and the broad-scale spatial distribution of their constituent sediment and community types is maintained The abundance and distribution of cockles – 15mm are maintained at levels sufficient to support the population at 4000 individuals 	<ul style="list-style-type: none"> The 5 year mean peak of the number of wintering oystercatchers is at least 4,000. The abundance and distribution of cockles of 15mm or larger and other suitable food are maintained at levels sufficient to support the population with a 5 year mean peak of 4,000 individuals. Oystercatchers are not disturbed in ways that prevent them spending enough time feeding for survival. Roost sites, including high tide roost sites, remain suitable for oystercatchers to roost undisturbed. The management and control of activities or operations likely to adversely affect the oystercatchers, is appropriate for maintaining the feature in favourable condition and is secure in the long term. 	<p><u>Coastal squeeze/ Coastal processes:</u></p> <p>Traeth Lafan / Lavan Sands is located in Conway Bay close to Bangor in north-west Wales. It is a large intertidal area of sand- and mud-flats lying at the eastern edge of the Menai Straits. The area has a range of exposures and a diversity of conditions, enhanced by freshwater streams that flow across the flats. The site is of importance for wintering waterbirds, especially Oystercatcher <i>Haematopus ostralegus</i>. In conditions of severe winter weather, Traeth Lafan acts as a refuge area for Oystercatchers displaced from the nearby Dee Estuary.</p> <p>Along the SPA coastline, the preferred management option is for NAI, therefore allowing for the sand banks to respond to sea level rise.</p> <p>Within PU 16.33, the policy of HTL for all epochs will lead to coastal squeeze which could result in the subsequent loss of intertidal sandflat habitat within the Site of 0.03ha in epoch 1, and 0.4ha in epoch 2. Beach loss and increased wave exposure will also occur under this management option at the western end of this PU.</p> <p>This loss of intertidal habitat would also occur within PU 20.1 and would result in a reduction in the supporting habitat (sandflat) for SPA species. Although the total area of intertidal sandflat is small in relation to the overall area, the loss could affect the favourable condition of the oystercatcher and curlew populations.</p>	None identified	Adverse effect on integrity could arise due to loss of supporting habitat for the site bird populations	No
	Salt marshes. Salt pastures. Salt steppes						

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 17 PDZ 17 – Teyn y Parc to Twyn Cliperau

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Y Twyni o Abermenai Aberffraw/ Abermenai to Aberffraw Dunes SAC							
Embryonic shifting dunes	NA	<ul style="list-style-type: none"> Extent Quality 	<ul style="list-style-type: none"> The distribution and extent of embryonic shifting dunes in late summer is determined by the availability of naturally accreting sand and strand line organic material. However, we would not expect all this potential embryonic dune habitat area to be vegetated in any one year and embryonic dunes may be absent in some years. Continuous absence over the six-year reporting cycle would cause the condition to be considered unfavourable. The potential for the embryonic shifting dunes element of the typical zonation, from beach to fixed dune, is intact along the soft coastal frontage. This includes an unrestricted supply of sediment, opportunity for aeolian transport and naturally occurring organic strandline material. The typical species of the strandline vegetation include <i>Atriplex</i> spp., <i>Beta vulgaris</i>, <i>Cakile maritime</i>, <i>Honkenya peploides</i>, <i>Salsola kali</i>. The typical species of the embryonic dune vegetation include <i>Elytrigia juncea</i> and /or <i>Leymus arenarius</i>. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore the sand dunes will be able to respond naturally to see level rise.</p> <p>HTL in epoch 1 for PU 17.3 may constrain the dune development; however it is unlikely to affect embryotic dunes, but may impact the dune habitat located inland.</p> <p>No Regulation 33 mapping is available to identify the specific location of these habitats. However, it can be assumed that the front dune habitat will be able to continue to develop, but the rear dunes may become constrained, however overall this dune feature will not be impacted.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')	NA	<ul style="list-style-type: none"> Extent Quality 	<ul style="list-style-type: none"> Shifting dunes with <i>Ammophila arenaria</i> are present along the dune front facing prevailing (southwest) winds where sediment supply is adequate. There should be no decrease in the total (aggregate) area of qualifying dune habitats for which this site was designated (ie the sum total of qualifying dune habitat should not diminish). The extent and location of individual dune habitat features may be subject to periodic and seasonal variation. The shifting dunes element of the typical zonation from beach to fixed dune is intact along the soft coastal frontage. Bare ground is present. The typical species of the shifting dune vegetation include <i>Ammophila arenaria</i>, <i>Leymus arenarius</i>, <i>Elymus farctus</i>, <i>Eryngium maritimum</i>, <i>Euphorbia portlandica</i>, <i>Euphorbia paralias</i>, and <i>Calystegia soldanella</i>. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>The site contains one of the largest areas of lyme-grass <i>Leymus arenarius</i> shifting dune community in Wales. The mobile dunes at the southern end of the site support an abundance of sea-holly <i>Eryngium maritimum</i>, and there is well-developed zonation of dune types, including both seaward transitions between mobile dune and foredune, and landward transitions to fixed dune and dune slack.</p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore it is expected that the sand dunes will be able to respond naturally to see level rise.</p> <p>HTL in epoch 1 for PU 17.3 may constrain the dune development; however, the site is not located on the side of the estuary of PU 17.3 and no constraint is therefore expected.</p> <p>No Regulation 33 mapping is available to identify the specific location of these habitats. However, it can be assumed that the front dune habitat will be able to continue to develop, but the rear dunes may become constrained, however overall this dune feature will not be impacted.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Fixed dunes with herbaceous vegetation ('grey dunes')	NA	<ul style="list-style-type: none"> Extent Quality 	<ul style="list-style-type: none"> The distribution of fixed dunes within the site may vary in response to natural dynamic processes and changes to other qualifying dune habitats for the site. There should be no decrease in the total area of fixed dunes with herbaceous vegetation. The fixed dunes element of the typical zonation from beach to fixed dune is intact along the soft coastal frontage. Bare ground is present. The typical species of the fixed dune vegetation include <i>Cerastium fontanum</i>, <i>Crepis capillaris</i>, <i>Cladonia spp.</i>, <i>Peltigera spp.</i>, <i>Erodium cicutarium</i>, <i>Geranium molle</i>, <i>Luzula campestris</i>, <i>Odontites verna</i>, <i>Pilosella officinarum</i>, <i>Plantago lanceolata</i>, <i>Prunella vulgaris</i>, <i>Festuca rubra</i>, <i>Galium verum</i>, <i>Anacamptis pyramidalis</i>, <i>Thymus polytrichus</i>, <i>Sedum acre</i>, <i>Veronica chamaedrys</i>, <i>Carex arenaria</i>, <i>C. flacca</i>, <i>Euphrasia officinalis</i>, <i>Hypnum cupressiforme</i>, <i>Hypochaeris radicata</i>, <i>Linum catharticum</i>, <i>Lotus corniculatus</i>, <i>Ononis repens</i>, <i>Rhinanthus minor</i>, <i>Rhytidadelphus squarrosus</i>, <i>R triquetrus</i>, <i>Tortula muralis</i> <i>Viola canina</i>, <i>V. riviniana</i> and <i>V. tricolour</i>. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore it is expected that the sand dunes will be able to respond naturally to sea level rise – and any loss will be a result of natural processes and not the SMP.</p> <p>No Regulation 33 mapping is available to identify this specific habitat. This habitat could be constrained inland in Epoch 1, if the habitat is located within PU 17.3. However, the site is not located on the side of the estuary of PU 17.3 and no constraint is therefore expected.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes
Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)			No conservation objectives identified in Core Management Plan.	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore it is expected that the sand dunes will be able to respond naturally to sea level rise – and any loss will be a result of natural processes and not the SMP.</p> <p>No Regulation 33 mapping is available to identify this specific habitat. This habitat could be constrained inland in Epoch 1, if the habitat is located within PU 17.3. However, the site is not located on the side of the estuary of PU 17.3 and no constraint is therefore expected.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 14.</p>	None required	No adverse effect expected	Yes
Dunes with <i>Salix repens ssp. argentea</i> (<i>Salicion arenariae</i>)	NA	<ul style="list-style-type: none"> Extent Quality 	<ul style="list-style-type: none"> The distribution of dunes with <i>Salix repens ssp argentea</i> is consistent with the typical dune zonation and where topographic conditions are suitable. The location of dunes with <i>Salix repens ssp argentea</i> within the site may vary in response to natural dynamic processes and changes to other qualifying dune habitats for the site. There should be no decrease in the total (aggregate) area of qualifying dune habitats for which this site was designated (i.e., the sum total of qualifying dune habitat should not diminish). The extent of individual dune habitat features may be subject to periodic and seasonal variation. <i>Salix repens</i> is at least frequent and generally 5 - 30cm tall. Opportunities for the initiation of embryonic dune slacks by wind erosion exist. Bare ground is present. The groundwater level is appropriate in winter and summer. Groundwater quality is unaffected by pollution. The typical species include <i>Salix repens</i>, <i>Carex arenaria</i>, <i>C flacca</i>, <i>Euphrasia officinalis</i>, <i>Festuca rubra</i>, <i>Lotus corniculatus</i>, <i>Ononis repens</i>, <i>Equisetum variegatum</i>, <i>Epipactis palustris</i>, <i>Epipactis leptochila spp dunensis</i> and <i>Pilosella officinarum</i>. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore it is expected that the sand dunes will be able to respond naturally to sea level rise – and any loss will be a result of natural processes and not the SMP.</p> <p>No Regulation 33 mapping is available to identify this specific habitat. This habitat could be constrained inland in Epoch 1, if the habitat is located within PU 17.3. However, the site is not located on the side of the estuary of PU 17.3 and no constraint is therefore expected.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Humid dune slacks	NA	<ul style="list-style-type: none"> Quality 	<ul style="list-style-type: none"> The distribution of humid dune slacks is consistent with the typical dune zonation and where topographical conditions are suitable. The location of humid dune slacks within the site may vary in response to natural dynamic processes and changes to other qualifying dune habitats for the site. There should be no decrease in the total (aggregate) area of qualifying dune habitats for which this site was designated (i.e. the sum total of qualifying dune habitat should not diminish). The extent and location of individual dune habitat features may be subject to periodic and seasonal variation. All humid dune slack communities should be present, from embryonic dune slacks with a high % of bare ground to more closed vegetation with <i>Salix repens</i>. Opportunities for the initiation of embryonic dune slacks (by wind erosion) exist. Bare ground is present. The ground water level is appropriate in winter and summer. Ground water quality is unaffected by pollution. The typical species include <i>Salix repens</i>, <i>Carex arenaria</i>, <i>C. flacca</i>, <i>Equisetum variegatum</i>, <i>Lotus corniculatus</i>, <i>Ononis repens</i>, <i>Potentilla anserina</i>, <i>Galium palustre</i>, <i>Mentha aquatica</i>, <i>Hydrocotyle vulgaris</i>, <i>Campyllum stellatum</i>, <i>Prunella vulgaris</i>, <i>Ranunculus flammula</i>, <i>Calliergon cuspidatum</i>, <i>Anagallis tenella</i>, <i>Parnassia palustris</i>, <i>Selaginella selaginoides</i>, <i>Dactylorhiza incarnata</i> and <i>Epipactis palustris</i>. Petalwort occurs in humid dune slacks in which <i>Equisetum variegatum</i> is frequent at Aberffraw and Newborough compartments. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion:</u></p> <p>The Site represents humid dune slacks in north Wales. There are large areas of open dune vegetation and many Humid dune slacks remain, although there have been changes in the water table that are partly attributable to the growth of the commercial forest. The changes have influenced the development of humid dune slacks, which nonetheless retain most the essential features of the habitat type.</p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore it is expected that the sand dunes will be able to respond naturally to sea level rise – and any loss will be a result of natural processes and not the SMP.</p> <p>No Regulation 33 map was available to identify this specific habitat. This habitat could be constrained inland in Epoch 1, if the habitat is located within PU 17.3. However, the site is not located on the side of the estuary of PU 17.3 and no constraint is therefore expected.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes
Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation	NA	<ul style="list-style-type: none"> Extent of habitat Condition of feature Presence of alien invasive species 	<ul style="list-style-type: none"> The distribution of the lakes reflects their physiographic status as dune-dammed lakes of shallow valleys. The extent (area) of the habitat is 30ha, except if reduced by natural succession to swamp or bog. The catchment of the lakes continues to provide adequate quality and quantity of water. Appropriate water level is maintained throughout the year, (seasonal fluctuation +/- 30cm). Water quality is characteristic of maritime, high alkalinity shallow lakes, such as to maintain pH 7-9, alkalinity 1500-2500µeq/l, dissolved oxygen and peak annual Total Phosphorus <50µg/l. Chlorophyll α values are low, and sufficient to allow both lakes to be passed as 'Good' or better for a 'high alkalinity shallow lake' using Water Framework Directive classification methods. The typical species are submerged aquatic plants including <i>Elatine hydropiper</i>, <i>Potamogeton trichoides</i>, <i>P. pectinatus</i>, <i>P. perfoliatus</i> <i>P. lucens</i>, <i>Ranunculus circinatus</i>, <i>Eleocharis acicularis</i>, <i>Myriophyllum spicatum</i>, <i>Callitriche hermaphroditica</i>, and <i>Chara</i> spp.. Emergent aquatic plants, typically <i>Phragmites australis</i>, <i>Schoenoplectus lacustris</i>, <i>Sparganium erectum</i>, <i>Typha latifolia</i>, <i>Alisma plantago-aquatica</i>, and <i>Littorella uniflora</i> should be present on the shoreline. Invasive or disruptive species such as <i>Crassula helmsii</i> or coarse fish should be absent. All factors affecting the achievement of these conditions are under control. 	<p>An area of freshwater is located at the end of the Abermenai to Aberffraw Dunes SAC. This lake is not subject to any SMP policy and adjacent PUs are unlikely to have an impact on the integrity of the feature. Any response to sea level rise will occur naturally.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Petalwort <i>Petalophyllum ralfsii</i>	Humid dune slacks	<ul style="list-style-type: none"> Extent of feature Condition of habitat 	<ul style="list-style-type: none"> The population of petalwort is stable or increasing. Petalwort occurs in humid dune slacks in which <i>Equisetum variegatum</i> is frequent, across all sectors of the site where habitat conditions are suitable, i.e. Aberffraw and Newborough compartments. Humid dune slack with bare sand or humus crust and short vegetation characterised by <i>Equisetum variegatum</i> is present at Aberffraw and Newborough compartments where sediment and hydrological conditions permit (see objective for humid dune slacks). Competition (including shading) from other species is controlled. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore it is expected that the sand dunes will be able to respond naturally to sea level rise – and any loss will be a result of natural processes and not the SMP.</p> <p>No Regulation 33 map was available to identify this specific habitat. This habitat could be constrained inland in Epoch 1, if the habitat is located within PU 17.3. However, the Site is not located on the side of the estuary of PU 17.3 and no constraint is therefore expected.</p> <p>This petalwort supporting habitat will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes
Shore dock <i>Rumex rupestris</i>	Rocky, sandy and raised beaches. Shore platforms. Lower slopes of cliffs. Rarely on dune slacks.	<ul style="list-style-type: none"> Presence / absence Number of individuals Vegetation structure 	<ul style="list-style-type: none"> The population of shore dock is stable or increasing. Shore dock occurs in at least 3 locations across the site. Opportunities occur for marine dispersal of seed. Open streamside, coastal soft cliff seepages or dune slack pool habitat is adequate for its survival. Adequate freshwater supply is maintained. Bare ground or disturbed areas are maintained (e.g. by grazing animals) to permit germination. Competition (including shading) from other species is controlled. All factors affecting the achievement of these conditions are under control. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore it is expected that the sand dunes will be able to respond naturally to sea level rise – and any loss will be a result of natural processes and not the SMP.</p> <p>The front and developing dune system are not likely to be impacted by the HTL policy in epoch 1 for PU 17.3 as the site is not located on the side of the estuary of PU 17.3 and no constraint is therefore expected, consequently the supporting habitats and their function will not be affected.</p> <p>This shore dock supporting habitat will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh SAC							
Estuaries	NA	<ul style="list-style-type: none"> Extent Spatial distribution of estuarine communities 	<ul style="list-style-type: none"> The distribution and extent of the estuaries, and their encompassed habitats, are determined predominantly by natural structure and environmental processes. The natural habitat structures necessary for the long-term maintenance of the estuaries and their encompassed habitats and typical species are maintained. The granulometry and structure of the estuaries' sediments, and their natural variation, distribution and extent, are determined predominantly by natural sediment supply and transport processes. The quality of habitat structure is no more degraded as a consequence of human action or by materials of anthropogenic origin. The natural environmental processes necessary for the long-term maintenance of the estuaries, their encompassed habitats and their typical species are maintained. Water & sediment chemistry are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. The salinity regime and gradients within the estuaries are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. Typical species are determined predominantly by inherent population dynamics and ecological processes. The species richness, population dynamics, abundance, biomass, population structures, physiological health, reproductive capacity, recruitment, range and mobility are maintained. The management of activities or operations likely to degrade the distribution, extent, structure, function or typical species populations of the feature, is appropriate for maintaining favourable conservation status and is secure in the long-term. The management of existing commercial fisheries for typical species ensures that species exploitation is at or below maximum sustainable yield and is secure in the long-term. 	Not present in PDZ 17.	None required	No adverse effect expected	Yes
<i>Salicornia</i> and other annuals colonising mud and sand	NA	<ul style="list-style-type: none"> Extent Distribution Condition Distribution and extent of common cordgrass <i>Spartina anglica</i> community SM6 within the pioneer saltmarsh zone 	<ul style="list-style-type: none"> The distribution and extent of <i>Salicornia</i> and other annuals is determined predominantly by natural structure and environmental processes. The natural habitat structures necessary for the long-term maintenance of <i>Salicornia</i> and other annuals and their typical species are maintained. The granulometry and structure of <i>Salicornia</i> and other annuals' sediments, and their natural variation, distribution and extent, are determined predominantly by natural sediment supply and transport processes. The geomorphology of the <i>Salicornia</i> and other annuals feature, and its natural variation, distribution and extent, are determined predominantly by the underlying geology and natural environmental processes. The natural environmental processes necessary for the long-term maintenance of the <i>Salicornia</i> and other annuals feature and its typical species, are maintained. The hydrographic and meteorological processes necessary for the long-term maintenance of the <i>Salicornia</i> and other annuals feature and its typical species are determined predominantly by natural environmental processes. The salinity regime and gradients of the <i>Salicornia</i> and other annuals feature are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. Nutrients in the water column and sediments remain within ranges that are not potentially detrimental to the long-term maintenance of the <i>Salicornia</i> and other annuals' communities, their distribution and range. Contaminants in the water column and sediments derived from human activity remain below levels potentially detrimental to the long-term maintenance of the <i>Salicornia</i> and other annuals' communities, their distribution and range. Dissolved oxygen levels in the water column and sediments are determined predominantly by natural environmental processes. Communities of typical species are maintaining their conservation status on a long-term basis as viable components of the <i>Salicornia</i> and other annuals' habitats the management of activities or operations likely to degrade the distribution, extent, structure, function or typical species communities of the feature, is appropriate for maintaining favourable conservation status and is secure in the long-term. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Within PDZ 17, only PUs 17.2, 17.3 and 17.4 are adjacent to this SAC; and of which PU 17.2 and 17.4 have a preferred policy option of NAI. Therefore it is expected that the sand dunes will be able to respond naturally to see level rise – and any loss will be a result of natural processes and not the SMP.</p> <p>On the whole, it is likely that the saltmarsh fronting the dunes will develop with sea level rise; however, HTL in epoch 1 at Aberffraw itself was identified as a potential constraint to saltmarsh development. However, given the nature of the low water channel alongside much of the PU and given the steep slope of the land to the west, even in a natural scenario, there would remain a natural constraint to the saltmarsh expansion.</p> <p>The MR planned in epoch 2 and 3 will alleviate the constraints on the natural development of the system and therefore allowing natural development of the coast in the long term.</p> <p><u>The sandflats are located within PU 17.2 where there is a preferred policy of NAI over all 3 epochs, therefore any loss of habitat will occur as a result of natural processes and not the SMP2 policies.</u></p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mudflats and sandflats not covered by seawater at low tide	NA	<ul style="list-style-type: none"> • Extent • Distribution of biotopes • Community composition • Extent of notable biotopes • Species composition of notable biotopes 	<ul style="list-style-type: none"> • The distribution and extent of the mudflats/ sandflats, and their encompassed habitat, are determined predominantly by natural structure and processes. • The natural habitat structures necessary for the long-term maintenance of the mudflats and sandflats, and their encompassed habitat and typical species are maintained. • The granulometry and structure of the mudflats and sandflats' sediments, and their natural variation, distribution and extent, are determined predominantly by natural sediment supply and transport processes. • The quality of habitat structure is no more degraded as a consequence of human action or by materials of anthropogenic origin. • The natural environmental processes necessary for the long-term maintenance of the mudflats and sandflats, their encompassed habitats and their typical species are maintained. • Water & sediment chemistry are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. • The salinity regime and gradients within the mudflats and sandflats are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. • Typical species are determined predominantly by inherent population dynamics and ecological Processes the species richness, population dynamics, abundance, biomass, population structures, physiological health, reproductive capacity, recruitment, range and mobility are maintained. • The management of activities or operations likely to degrade the distribution, extent, structure, function or typical species populations of the feature, is appropriate for maintaining favourable conservation status and is secure in the long-term. • The management of existing commercial fisheries for typical species ensures that exploitation is at or below maximum sustainable yield and secure in the long-term. 				
Atlantic salt meadow (ASM)	NA	<ul style="list-style-type: none"> • Extent of Atlantic salt meadow • Condition of ASM Creek system and salt pan pattern • Zonation of vegetation • Sward structure 	<ul style="list-style-type: none"> • The distribution and extent of the salt meadows is determined predominantly by natural structure and environmental processes. • The natural habitat structures necessary for the long-term maintenance of the salt meadows and typical species are maintained. • The granulometry and structure of the salt meadows' sediments, and their natural variation, distribution and extent, are determined predominantly by natural sediment supply and transport processes. • The geomorphology of the salt meadows, and their natural variation, distribution and extent, are determined predominantly by the underlying geology and natural environmental processes. • The hydrographic and meteorological processes necessary for the long-term maintenance of the salt meadows and their typical species are determined predominantly by natural environmental processes. • The salinity regime and gradients within the salt meadows are determined predominantly by natural hydrodynamic, hydrological and meteorological processes. • Nutrients in the water column and sediments are within ranges that are not potentially detrimental to the long-term maintenance of the salt meadows' communities, their distribution and range. • Contaminants in the water column and sediments derived from human activity remain below levels potentially detrimental to the long-term maintenance of the salt meadows' communities, their distribution and range. • Dissolved oxygen levels in the water column and sediments are determined predominantly by natural environmental processes; • The zonation of saltmarsh from pioneer, lower mid marsh and upper mid marsh and transitions to fresh water/terrestrial vegetation are maintained. • Communities of typical species are maintaining their conservation status on a long-term basis as viable components of the salt meadows' habitats. • The species richness, community dynamics, abundance, biomass, community structures, physiological health, reproductive capacity, recruitment and range are maintained. • The management of activities or operations likely to degrade the distribution, extent, structure, function or typical species communities of the feature, is appropriate for maintaining favourable conservation status and is secure in the long-term. 				

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Glannau Ynys Gybi/ Holy Island Coast SAC							
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	<ul style="list-style-type: none"> Extent of the vegetated sea cliffs of the Atlantic and Baltic coasts (including cliff & crevice vegetation, maritime grassland and maritime heath). Condition of the vegetated sea cliffs of the Atlantic and Baltic coasts (including cliff & crevice vegetation, maritime grassland and maritime heath). 	<ul style="list-style-type: none"> Cliff and crevice vegetation, maritime grassland and maritime heath occurs throughout the site in appropriate areas and their relative extent and zonation are determined by topography, exposure, grazing and natural stochastic events (e.g. storms). The cliff vegetation is composed of native plants such as sea spurrey <i>Spergularia rupicola</i> Sea lavenders (<i>Limonium britannicum</i>, <i>L. procerum</i>, <i>L. binervosum</i>) and sea samphire <i>Crithmum maritimum</i>. Non-native plants, such as Hottentot fig <i>Carpobrotus edulis</i> or purple dew-plant <i>Disphyma crassifolium</i> are preferably absent or at least not spreading. Maritime grassland occupies higher ledges on the coastal cliffs and cliff-top. The following plants are common in the maritime grassland: red fescue <i>Festuca rubra</i>, thrift <i>Armeria maritima</i>; spring squill <i>Scilla verna</i> and sea plantain <i>Plantago maritima</i> Maritime Heathland occupies areas inland of the maritime grassland. The following plants are common in the maritime heathland: heather <i>Calluna vulgaris</i>; bell heather <i>Erica cinerea</i> Western gorse <i>Ulex gallii</i>, thrift <i>Armeria maritima</i>, sea plantain <i>Plantago maritima</i>, buck's horn plantain <i>Plantago coronopus</i> or spring squill <i>Scilla verna</i>. Competitive species indicative of under-grazing, particularly bracken <i>Pteridium aquilinum</i> and gorse <i>Ulex europaeus</i> and grass species indicative of improvement including creeping bent <i>Agrostis stolonifera</i>, cock's foot <i>Dactylus glomerata</i>, perennial rye-grass <i>Lolium perenne</i> and Yorkshire fog <i>Holcus lanatus</i> are largely absent from the heath. Sustainable populations of the plants which make up the Atlantic sea cliff rare plant assemblage will be present, notably, South Stack fleawort <i>Tephrosia integrifolia</i>, Sea lavenders (<i>Limonium britannicum</i>, <i>L. procerum</i>, <i>L. binervosum</i>) Golden hair lichen <i>Teloschistes flavicans</i> and Ciliate strap lichen <i>Heterodermia leucomelos</i>. All factors affecting the achievement of these conditions, including grazing intensity and burning, will be under control. 	<p>The cliff feature of this SAC is located within PU 17.14 where NAI is the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the vegetated cliffs would be allowed to erode naturally, which would allow natural succession of vegetation, and response of intertidal mudflat and sandflat and dune habitats to sea level rise.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>	None required	No adverse effect expected	Yes
European dry heaths	NA	<ul style="list-style-type: none"> Extent of dry heath Condition of dry heath Distribution of dry heath 	<ul style="list-style-type: none"> Dry heath covers no less than the present mapped extent (to be determined) The following plants are common in the dry heath: heather <i>Calluna vulgaris</i>; bell heather <i>Erica cinerea</i>, western gorse <i>Ulex gallii</i>. Competitive species indicative of under-grazing, particularly bracken <i>Pteridium aquilinum</i>, purple moor-grass <i>Molinia caerulea</i> and western gorse <i>Ulex gallii</i> are kept in check. 70% of dry heath will be "good condition" dry heath. The dry heath provides abundant and accessible food for breeding chough. The dry heath supports sustainable (flowering) populations of dodder. Spotted rock rose occurs in at least 5 distinct loci (presently South Stack, Porth Dafarch north, Porth y Garan, Pany yr Hyman path, Pant yr Hyman heath) of at least 200 plants each. Juniper occurs in at least 3 locations totalling 50 plants. The dry heath supports a viable population of silver studded blue. All factors affecting the achievement of these conditions are under control. 	<p>Glannau Ynys Gybi/ Holy Island Coast is the most important site in north Wales for maritime forms of European dry heaths. The main NVC types are H7 <i>Calluna vulgaris</i> – <i>Scilla verna</i> heath and H8 <i>Calluna vulgaris</i> – <i>Ulex gallii</i> heath. The dry heathland is associated with small areas of wet heath and forms part of a complete zonation from maritime grassland through maritime heath to inland heath to inland heath with bracken <i>Pteridium aquilinum</i> to bramble <i>Rubus fruticosus</i> scrub. The heath is an important locus for spotted rock-rose <i>Tuberaria guttata</i>.</p>			Yes
Northern Atlantic wet heaths with <i>Erica tetralix</i>	NA	<ul style="list-style-type: none"> Extent of Wet heath Condition of wet heath Distribution of wet heath 	<ul style="list-style-type: none"> Wet heath covers no less than the present mapped extent (to be determined) The following plants are common in the wet heath: heather <i>Calluna vulgaris</i>; cross-leaved heath <i>Erica tetralix</i>, bog moss Sphagnum spp. devil's bit scabious <i>Succisa pratensis</i> and <i>Narthecium ossifragum</i>. Competitive species indicative of under-grazing, particularly bracken <i>Pteridium aquilinum</i>, purple moor-grass <i>Molinia caerulea</i> and western gorse <i>Ulex gallii</i> are kept in check. 70% of wet heath will be "good condition" wet heath. The wet heath supports sustainable (flowering) populations of marsh gentian, three-lobed water crowfoot, and pillwort. The wet heath supports a viable population of bog bush cricket. The wet heath contributes potential support of a meta-population of marsh fritillary. All factors affecting the achievement of these conditions are under control. 	<p>The cliff feature of this SAC is located within PU 17.14 where NAI is the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the vegetated cliffs would be allowed to erode naturally, which would allow natural succession of vegetation.</p> <p>This interest feature will not be lost or adversely affected due to the SMP2 policies in PDZ 17.</p>			Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Ynys Feurig, Cemlyn Bay and The Skerries SPA							
Internationally important Article 4.1 Species (breeding): Roseate tern <i>Sterna dougallii</i> , common tern <i>Sterna hirundo</i> , arctic tern <i>Sterna paradisaea</i> , Sandwhich tern <i>Sterna sandvicensis</i>	Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	<ul style="list-style-type: none"> Population size Productivity 	<ul style="list-style-type: none"> The number of breeding terns within the SPA is stable or increasing. The number of chicks successfully fledged in the SPA and beyond is sufficient to help sustain the population. The range and distribution of terns within the SPA and beyond is not constrained or hindered. The extent of supporting habitats used by terns is stable or increasing. Supporting habitats are of sufficient quality to support the requirements of terns. There are appropriate and sufficient food sources for terns within access of the SPA. Actions or events likely to impinge on the sustainability of the population are under control. 	<u>Coastal Squeeze / Coastal Processes:</u> Policies for PUs 17.6 (HTL/HTL/MR) and 17.7 (HTL/HTL/HTL) are located adjacent to the SPA, however, they will affect the habitat features present on or around Ynys Feurig SPA within is within the NAI policy of PU 17.8. This tern supporting habitat will not be lost or adversely affected due to the SMP2 policies in PDZ 17.	None required	No adverse effect expected	Yes
	Shingle. Sea cliffs. Islets						
	Heathland and scrubland						
	Bogs, marshes, fens						
Internationally important Article 4.1 Species (breeding and wintering): Chough <i>Pyrhocorax pyrrhocorax</i>	Salt marshes. Salt pastures. Salt steppes	<ul style="list-style-type: none"> Breeding population Breeding population Foraging habitat condition 	<ul style="list-style-type: none"> The breeding population of Chough within the SPA is at least 18 pairs, of which at least 12 should be within the Glannau Ynys Gybi / Tre Wilmot SSSI and at least 6 should be within the Glannau Rhoscolyn SSSI. The non-breeding population of Chough is at least 18 individuals or 2.5 % of the GB wintering population. Sufficient suitable habitat (including Atlantic sea cliffs, maritime grassland, maritime heath, wet heath and dry heath) is present and in appropriate condition to support the breeding populations. All factors affecting the achievement of these conditions are under control. 	The cliff feature of this SAC is located within PU 17.14 where NAI is the preferred policy for this whole unit, therefore no direct or indirect effects as a result of coastal management policy is expected. No significant effect in the long term as the supporting habitats would be allowed to erode naturally and develop through natural succession. This Chough supporting habitat will not be lost or adversely affected due to the SMP2 policies in PDZ 17.	None required	No adverse effect expected	Yes
	Heathland and scrub						
	Shingle. Sea cliffs. Islets.						
	Humid grassland. Mesophile grassland						
	Bogs, marshes and fens						

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 18: PDZ 18 North Anglesey

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Bae Cemlyn/ Cemlyn Bay SAC							
Coastal lagoons	NA	<ul style="list-style-type: none"> Extent Species population measures 	<ul style="list-style-type: none"> There is no loss of area other than that due to natural processes. The specialised plant and animal communities within the lagoon remain. All factors affecting the achievement of these conditions are under control. 	<p><u>Saline intrusion / Coastal Squeeze / Coastal Processes:</u></p> <p>Cemlyn lagoon on the north coast of Anglesey, north Wales, is considered to be the best example of a saline coastal lagoon in Wales. The lagoon is separated from the sea by a shingle bank with a narrow channel at the western end, across which a sluice system was built in the 1930s. Seawater exchange occurs mainly through the sluice and by percolation through the shingle bank, although in extreme storms coinciding with spring tides waves break over the top of the shingle bank.</p> <p>Within the Cemlyn Bay SAC the preferred policy option is for MR in epoch 1 with NAI the preferred policy option in epochs 2 and 3.</p> <p>The MR strategy would be to manage the natural change over epoch 1 and that the overall intent of NAI of epochs 2 and 3 would allow for natural development of the whole area, with the initial management there to ensure that this occurs gradually and allows for a gradual transition of conditions. However, MR will result in a potential loss of extent of the lagoon area, albeit small in scale in Epoch 1.</p> <p>NAI in Epochs 2 and 3 is likely to result in a greater reduction in area of the lagoon habitat. Furthermore, potential breaches could occur which would alter the physical and chemical characteristics of the lagoon, and could result in significant changes to the lagoon plant and animal communities. This long term change would arise due to the natural erosion and breach processes (which may not necessarily occur) and would not be as a result of the SMP.</p> <p>Potentially 0.3ha of lagoon habitat could be lost as a result of MR in epoch 1, which would result in an adverse effect on the integrity of the site lagoon feature.</p>	<p>The scale of impact is uncertain in that a worst case estimate has been derived from likely ridge movement in an unconstrained scenario in epoch 1. This extent of loss is therefore considered to be unlikely but as details cannot be confirmed at this stage it is expected that mitigation could ensure that MR activities do not specifically result in moving the defence line, rather on the management and maintenance of the weir structure. The aim of this would be to allow natural transition between the existing condition semi natural and natural conditions.</p>	<p>No adverse effect expected in Epoch 1 as a result of SMP policy.</p>	Yes
Perennial vegetation of stony banks	NA	<ul style="list-style-type: none"> Habitat extent Habitat quality Physical structure: functionality and sediment supply 	<ul style="list-style-type: none"> The extent of the vegetation of shingle banks is maintained unless altered by natural (e.g. storm) events. Typical component species of vegetation of shingle banks are maintained. Invasive alien species (e.g. <i>Fallopia japonica</i>) are absent. The management of activities or operations likely to damage or degrade the population dynamics, natural range and supporting habitat of the feature is appropriate for maintaining favourable conservation status and is secure in the long-term. 	<p>It is unlikely that MR would need to disturb the shingle banks or the species present on them during epoch 1. However, until details of the activities are determined, potential disturbance could arise; however, the extent of disturbance cannot be identified at this stage. Consequently, an adverse effect could occur in the short-term.</p> <p>NAI during epoch 2 and 3 will result in the natural movement and succession of the shingle banks and the vegetation communities.</p>	<p>Ensure no disturbance to shingle ridge occurs during MR activities.</p>	<p>No adverse effect expected in Epoch 1 as a result of SMP policy.</p>	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Ynys Feurig, Cemlyn Bay and The Skerries SPA							
Internationally important Article 4.1 Species (breeding): Roseate tern <i>Sterna dougallii</i> , common tern <i>Sterna hirundo</i> , arctic tern <i>Sterna paradisaea</i> , Sandwhich tern <i>Sterna sandvicensis</i>	Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	<ul style="list-style-type: none"> Population size Productivity 	<ul style="list-style-type: none"> The number of breeding terns within the SPA is stable or increasing. The number of chicks successfully fledged in the SPA and beyond is sufficient to help sustain the population. The range and distribution of terns within the SPA and beyond is not constrained or hindered. The extent of supporting habitats used by terns is stable or increasing. Supporting habitats are of sufficient quality to support the requirements of terns. There are appropriate and sufficient food sources for terns within access of the SPA. Actions or events likely to impinge on the sustainability of the population are under control. 	<u>Coastal Squeeze / Coastal Processes / Saline intrusion:</u> Within the Cemlyn Bay SPA the preferred policy option is for MR in epoch 1 with NAI the preferred policy option in epochs 2 and 3 (PU18.6). The MR strategy would be to manage the natural change over epoch 1 and that the overall intent of NAI of epochs 2 and 3 would allow for natural development of the whole area, with the initial management there to ensure that this occurs gradually and allows for a gradual transition of conditions. MR is not expected to result in a loss of the cumulative supporting habitat extents, but may result in minor change in the balance of intertidal, marsh, heath, and lagoon habitats, though not expected to result in a change to essential features (e.g. nesting area or food resource) for the species for which the site is designated. In the long term there will be a considerable change to the habitat due to the set back of the shingle ridge; reducing the area of lagoon and increased over-topping of the ridge. However, this would be as a result of natural processes within the area and not as a result of the SMP. It is unknown whether the ridge will breach and whether the coastal lagoon feature will be maintained in epoch 2 and 3, however, if it does occur it will be a result of natural processes and not as a result of the SMP2 policy.	None required	No adverse effect.	Yes
	Shingle. Sea cliffs. Islets.						
	Heathland and scrubland						
	Bogs, marshes, fens						
	Salt marshes. Salt pastures. Salt steppes.						

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 19: PDZ 19 – East Bays Anglesey - Trwyn Cwmrwd to Puffin Island

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC							
Sandbanks slightly covered by sea water	NA		<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing.</p> <p>For the intertidal mudflats and sandflats feature these include;</p> <ul style="list-style-type: none"> Muddy gravel communities Dwarf eelgrass, <i>Zostera noltei</i> beds Sediment communities at Traeth Lafan <p>For the reef feature these include;</p> <ul style="list-style-type: none"> Reef communities in high energy wave-sheltered, tide-swept conditions Under-boulder, overhang and crevice communities Limestone reef communities Clay outcrop reef communities <p>For the large shallow bay feature these include;</p> <ul style="list-style-type: none"> Organically enriched muddy sediment areas <p><u>Structure and Function</u> The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include;</p> <ul style="list-style-type: none"> geology, sedimentology, geomorphology, hydrography and meteorology, water and sediment chemistry, biological interactions. 	<p><u>Coastal squeeze / Coastal processes:</u> Menai Strait and Conwy Bay between mainland Wales and Anglesey includes the Four Fathom Banks complex, which is a relatively rare type of subtidal sandbank in Wales, in that it is comparatively large, and is fairly sheltered from wave action but situated in an area of open coast. The sandbanks vary from stable muddy sands in areas that experience weak tidal streams to relatively clean well-sorted and rippled sand in the outer area of the bank where tidal streams are stronger. In very shallow waters, particularly in the inner shore areas, relatively species-rich sandy communities are dominated by polychaetes such as <i>Spio filicornis</i>. In some years when numbers of bivalves are high, internationally important flocks of common scoter <i>Melanitta nigra</i> have been observed to congregate in the area of the Four Fathom Banks complex to feed.</p> <p>The subtidal sandbanks within PDZ 19 will be able to adapt naturally and the continued feed of material will maintain the sandbanks. The HTL policies within PU 19.5, 19.10 and 19.12 will no directly or indirectly affect the subtidal sandbanks.</p>	None required	No adverse effect expected	Yes
Mudflats and sandflats not covered by sea water at low tide	NA	<ul style="list-style-type: none"> Range. Structure and function. Typical species. 	<p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. Restoration and recovery <p>This includes the need for restoration of some reef features such as underboulder, overhang and crevice communities, and of some mudflat and sandflat features such as the muddy gravel habitats and sheltered muddy habitats. All of these habitats are also part of the large inlets and bays feature.</p>	<p><u>Coastal squeeze / Coastal processes:</u> The intertidal mudflats and sandflats are only located in front of the beach at Red Wharf Bay. The beach is not part of the SAC, therefore there will be no adverse impact as a result of the SMP2 policies.</p>	None required	No adverse effect expected	Yes
Large shallow inlets and bays	NA		<p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. Restoration and recovery <p>This includes the need for restoration of some reef features such as underboulder, overhang and crevice communities, and of some mudflat and sandflat features such as the muddy gravel habitats and sheltered muddy habitats. All of these habitats are also part of the large inlets and bays feature.</p> <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> species richness 	<p><u>Coastal Squeeze / Coastal processes:</u> The preferred management options within PDZ 19 range from NAI, HTL and MR, with the majority of the open coastline being subject to NAI.</p> <p>In the PUs where NAI will be the policy option in the long term and will allow the bay to continue to erode more naturally, therefore making an improvement on its current erosion behaviour.</p> <p>NAI is the preferred policy in all 3 epochs within PUs 19.1, 19.3, 19.6, 19.8, 19.9, 19.11, 19.13, 19.15, 19.16 and 19.17 where any loss of habitat will be a result of the natural processes and not the SMP2 policy.</p> <p>HTL is the preferred policy at the following PUs:</p> <p>19.5 = HTL/HTL/MR 19.10 = HTL/HTL/MR 19.12 = HTL/HTL/MR</p> <p>These PUs lie outside the SAC boundary. Whilst HTL could constrain intertidal habitats, none are located within the SAC site boundary and coupled with MR (creation of intertidal habitat) outside the SAC boundary there will be no adverse effect on the integrity of the SAC.</p>	None required	No adverse effect expected	Yes
Submerged or partially	NA			Not present in PDZ 19.	None required	No adverse effect	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
submerged sea caves			<ul style="list-style-type: none"> population structure and dynamics, physiological health, reproductive capacity recruitment, mobility range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. 			expected	
Reefs	NA			<p><u>Coastal squeeze / Coastal processes:</u></p> <p>The reefs of the Menai Strait and Conwy Bay between mainland Wales and Anglesey include the tidal rapids of the Menai Strait, and limestone reefs along the south-east Anglesey coast and around Puffin Island and the Great and Little Ormes. The environmental conditions of the Menai Strait are unusual. The water is relatively turbid, containing a relatively high level of suspended material, and although the area is largely sheltered from wave action tidal streams are strong, reaching up to 8 knots (4m/s⁻¹) in places during spring tides. As a result, the rocky reefs of the Strait are dominated by a diverse and unusual mixture of animals that feed mainly by filtering their food from the seawater.</p> <p>NAI policies will allow the actively eroding cliffs to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease.</p> <p>HTL policies occur where there is no intertidal or limited intertidal reefs; or occurs outside the SAC boundary, therefore it is concluded that there is no adverse impact to the reef habitat.</p> <p>MR in the long term would ensure that coastal squeeze would not be an issue and could result in additional intertidal habitat outside the SAC site boundary that could support intertidal reef habitat.</p>	None required	No adverse effect expected	Yes
Ynys Seiriol / Puffin Island SPA							
Internationally important Article 4.2 Species (breeding): Cormorant <i>Phalacrocorax carbo</i> (North-western Europe)	Shingle. Sea cliffs. Islets Humid grassland. Mesophile grassland Heathland and scrub	<ul style="list-style-type: none"> Population size Reproductive success 	<ul style="list-style-type: none"> The number of breeding cormorants within the SPA are stable or increasing. The abundance and distribution of prey species are sufficient to support this number of breeding pairs and for successful breeding. The management and control of activities or operations likely to adversely affect the Cormorants, is appropriate for maintaining the feature in favourable condition and is secure in the long term. 	<p>The preferred policy option for Puffin Island is NAI. The cliffs are undefended and will be able to respond naturally to sea level rise.</p> <p>No significant impact as a result of the SMP policy will occur.</p> <p>No Habitat loss will occur as a result of the SMP2 policy within the Puffin Island SPA.</p>	None required	No adverse effect expected	Yes

Appendix B – Assessment Tables of the West Wales SMP2 on Natura 2000 Sites

Table 20 PDZ 20 – Llanfairfechan to Llanrwst

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Great Orme's Head/ Pen y Gogarth SAC							
European dry heaths	NA	<ul style="list-style-type: none"> Extent of Dry Heath Condition of Dry Heath 	<ul style="list-style-type: none"> The dry heath occupies at least 25% of the total site area. The dry heath is given the opportunity to expand at the expense of bracken and gorse but not at the expense of semi-natural dry grassland. The dry heath is co-dominated by heather, bell heather and western gorse. At least 33% of the dry heath is species-rich where the following plants are present; common rock-rose, dropwort, sheep's-fescue, glaucous sedge, harebell, wild thyme and common bird's-foot-trefoil. Pioneer and building phases of heath vegetation are present. Competitive species indicative of lack of management, bracken <i>Pteridium aquilinum</i>, gorse <i>Ulex europaeus</i> and native shrub and tree species are kept in check. All factors affecting the achievement of these conditions are under control. 	<p><u>Erosion:</u></p> <p>These SAC habitats are located on the cliffs within PDZ 20 which are located within PUs 20.12, 20.13 and 20.14 where the preferred policy in NAI. Therefore any loss of habitat as a result erosion will occur due to natural processes and not as a result of the SMP2 policy.</p>	None required	No adverse effect expected	Yes
Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)	NA	<ul style="list-style-type: none"> Extent of Semi-natural Dry Grasslands Condition of Semi-natural Dry Grasslands 	<ul style="list-style-type: none"> The semi-natural dry grasslands occupy at least 35% of the total site area. The semi-natural dry grasslands are given the opportunity to expand at the expense of bracken and gorse but not at the expense of dry heath. The semi-natural dry grasslands are a species-rich mixture of characteristic herbs, grasses and sedges that include hoary rock-rose, common rock-rose, salad burnet, wild thyme, dropwort, common bird's-foot-trefoil, sheep's fescue, crested hair-grass, quaking grass, meadow oat-grass, glaucous sedge and spring sedge. Terricolous lichens, acrocarpous mosses and bare rock and soil are present in the open short turf grassland community. Species indicative of agricultural improvement and/or trampling are rare or absent. Native shrub and tree species and bracken are rare or absent. Invasive non-native species such as low growing and mat-forming Cotoneasters are absent. All factors affecting the achievement of these conditions are under control. 				
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	<ul style="list-style-type: none"> Extent of vegetated sea cliffs vegetation Condition of vegetated sea cliffs vegetation 	<ul style="list-style-type: none"> The extent of the sea cliffs and their associated short turf maritime grassland will occupy not more than 5% of the site, excepting natural catastrophic cliff collapse. Cliff and crevice vegetation will occur naturally on suitable cliff sections throughout the site. The vegetation will be composed of native plants such as sea cabbage <i>Brassica oleracea</i>. The expansion of climbing plants such ivy <i>Hedera helix</i> and the spread of non-native red valerian <i>Centranthus ruber</i> will be discouraged. Short turf maritime grassland will be dominated by red fescue and characteristic species such as thrift and buck's-horn plantain. All factors affecting the achievement of these conditions are under control. 	<p><u>Restriction of coastal erosion:</u></p> <p>NAI is the preferred policy for PUs 20.12 and 20.13 which encompasses the majority of the Great Orme's Head cliff habitat, therefore no direct or indirect effects as a result of coastal management policy is expected.</p> <p>No significant effect in the long term as the vegetated cliffs would be allowed to erode naturally, which would allow natural succession of vegetation.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC							
Sandbanks slightly covered by sea water	NA	<ul style="list-style-type: none"> Range. Structure and function. Typical species. 	<p><u>Range</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing.</p> <p>For the intertidal mudflats and sandflats feature these include;</p> <ul style="list-style-type: none"> Muddy gravel communities Dwarf eelgrass, <i>Zostera noltei</i> beds Sediment communities at Traeth Lafan <p>For the reef feature these include;</p> <ul style="list-style-type: none"> Reef communities in high energy wave-sheltered, tide-swept conditions Under-boulder, overhang and crevice communities Limestone reef communities Clay outcrop reef communities <p>For the large shallow bay feature these include;</p> <ul style="list-style-type: none"> Organically enriched muddy sediment areas <p><u>Structure and Function</u> The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include: geology, sedimentology, geomorphology, hydrography and meteorology, water and sediment chemistry, and biological interactions.</p> <p>This includes a need for nutrient levels in the water column and sediments to be:</p> <ul style="list-style-type: none"> at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. Restoration and recovery <p>This includes the need for restoration of some reef features such as underboulder, overhang and crevice communities, and of some mudflat and sandflat features such as the muddy gravel habitats and sheltered muddy habitats. All of these habitats are also part of the large inlets and bays feature.</p> <p><u>Typical Species</u> The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include:</p> <ul style="list-style-type: none"> species richness population structure and dynamics, physiological health, reproductive capacity recruitment, mobility range <p>As part of this objective it should be noted that:</p> <ul style="list-style-type: none"> populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. 	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>Menai Strait and Conwy Bay between mainland Wales and Anglesey includes the Four Fathom Banks complex, which is a relatively rare type of subtidal sandbank in Wales, in that it is comparatively large, and is fairly sheltered from wave action but situated in an area of open coast. The sandbanks vary from stable muddy sands in areas that experience weak tidal streams to relatively clean well-sorted and rippled sand in the outer area of the bank where tidal streams are stronger.</p> <p>NAI policies within PUs 20.12 and 20.13 will allow the actively eroding foreshore to continue to erode, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease, however the condition of the sandbanks may change if eroding material is continually deposited in the area – either changing the sediment type, or raising/lowering the sandbanks; however, this will be a result of the natural processes and not a result of the SMP2 policies.</p> <p>A HTL in the PUs listed below will allow the subtidal sandbanks to respond to sea level rise at the expense/loss of the intertidal habitats. As the intertidal habitats are squeezed and the habitat lost where it is unable to move landward, the extent of the subtidal habitat will increase – through direct creation of subtidal sandbanks as the intertidal sandbanks are covered by seawater, or through the deposition of sediment onto the existing habitats.</p> <p>20.1 = HTL/HTL/HTL 20.2 = HTL/HTL/HTL 20.3 = HTL/HTL/MR 20.9 = HTL/HTL/MR 20.10 = HTL/HTL/HTL 20.11 = HTL/HTL/MR</p> <p>MR in the long term (as listed above) would ensure that coastal squeeze would not be an issue to the intertidal habitat and will ensure that subtidal sandbanks do not significantly increase in extent at the expense of the intertidal habitat.</p> <p>Overall it is concluded that the subtidal sandbanks will be able to respond to the changing conditions and will not be adversely impact by the SMP2 policies. There is a risk that eroded material will be lost if there is a significant change in the coastal processes of the area, and monitoring should be carried out in the future to determine whether an impact has occurred.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Mudflats and sandflats not covered by sea water at low tide	NA			<p><u>Coastal squeeze / Coastal processes:</u></p> <p>The majority of the coastline within this SAC comprises mudflat or sandflat. However, the extent of the SAC does not include all intertidal sand/mudflats within all the PUs in PDZ 20.</p> <p>The following PUs contain only small areas of sandflats/mudflats that fall within the SAC boundary:</p> <p>20.1 = HTL/HTL/HTL 20.2 = HTL/HTL/HTL 20.3 = HTL/HTL/MR 20.11 = HTL/HTL/MR</p> <p>All of the intertidal sandflats within this PUs with the exception of PU 20.1 are outside the SAC boundary; however, small patches of sandflats that are not covered by low tide are included in the other 3 PUs listed above.</p> <p>HTL policy in epoch 1 within PUs 20.1, 20.2, 20.3 and 20.11 will result in a loss of intertidal habitat as the sandflats/mudflats respond to sea level rise. However, given the limited if any extent of intertidal habitat within the boundary of the SAC these extents will not be prevented from developing naturally as a result of the HTL policies for PUs 20.2, 20.3, and 20.11.</p> <p>HTL is proposed for all epochs in PU20.1. This will result in a loss of intertidal sandflat as the sandflats are constrained. Although no intertidal sandflat is expected to be lost in epoch 1, up to 0.03ha could be lost in epoch 2, and 0.01ha in epoch 3. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent.</p>	None identified	An adverse effect on site integrity is expected	No
Reefs	NA			<p><u>Coastal squeeze / Coastal processes:</u></p> <p>A small, localised area of reef occurs at the mouth of the estuary within PDZ 20. and are primarily located adjacent to PUs 20.2, 20.3, 20.11 and 20.12 where the policy option are:</p> <p>20.2 = HTL/HTL/HTL 20.3 = HTL/HTL/MR 20.11 = HTL/HTL/MR 20.12 = NAI/NAI/NAI</p> <p>NAI policies will allow the intertidal sandflats and cliffs to continue to erode and develop naturally, allowing the subtidal reefs to maintain their extent in response to sea level rise.</p> <p>A HTL at PU 20.2, 20.3 and 20.11 will cause reduction of the extent of intertidal sandflat but not of subtidal reef and no affect is therefore expected on the reef features.</p>	None required	No adverse effect expected	Yes

Qualifying feature	Supporting Habitat	Attribute	Target	Potential impacts	Avoidance or mitigation measures	Residual impact	Conclude no adverse effect on integrity?
Traeth Lafan / Lavan Sands, Conway Bay SPA							
Internationally important Article 4.2 Species (wintering): Oystercatcher <i>Haematopus ostralegus</i> , curlew <i>Numenius arquata</i>	<ul style="list-style-type: none"> Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins). 	<ul style="list-style-type: none"> Number of wintering oystercatchers. The extent of intertidal flats and the broad-scale spatial distribution of their constituent sediment and community types is maintained. The abundance and distribution of cockles – 15mm are maintained at levels sufficient to support the population at 4000 individual. 	<ul style="list-style-type: none"> The 5 year mean peak of the number of wintering oystercatchers is at least 4,000. The abundance and distribution of cockles of 15mm or larger and other suitable food are maintained at levels sufficient to support the population with a 5 year mean peak of 4,000 individuals. Oystercatchers are not disturbed in ways that prevent them spending enough time feeding for survival. Roost sites, including high tide roost sites, remain suitable for oystercatchers to roost undisturbed. The management and control of activities or operations likely to adversely affect the oystercatchers, is appropriate for maintaining the feature in favourable condition and is secure in the long term. <p>Traeth Lafan / Lavan Sands is located in Conway Bay close to Bangor in north-west Wales. It is a large intertidal area of sand- and mud-flats lying at the eastern edge of the Menai Straits. The area has a range of exposures and a diversity of conditions, enhanced by freshwater streams that flow across the flats. The site is of importance for wintering waterbirds, especially Oystercatcher <i>Haematopus ostralegus</i>. In conditions of severe winter weather, Traeth Lafan acts as a refuge area for Oystercatchers displaced from the nearby Dee Estuary.</p>	<p><u>Coastal squeeze / Coastal processes:</u></p> <p>The SPA only encompasses a small area of PU 20.1 where the preferred policy is HTL over all 3 epochs. This area may be impacted by coastal squeeze and a total loss of 0.04ha of intertidal sandflat in epochs 2 and 3 (epoch 2 = 0.03ha, epoch 3 = 0.01ha) will occur in front of the defence.</p> <p>This loss of intertidal habitat would also occur within PU 16.33 and would result in a reduction in the supporting habitat (sandflat) for SPA species. Although the total area of intertidal sandflat is small in relation to the overall area, the loss could affect the favourable condition of the oystercatcher and curlew populations.</p>	None identified	Adverse effect on integrity could arise	No
	<ul style="list-style-type: none"> Salt marshes. Salt pastures. Salt steppes. 			Not present in PDZ 20.			

**ANNEX C - DETAILED ASSESSMENT TABLES FOR SITES OF SPECIAL
SCIENTIFIC INTEREST**

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
1.1	SSSI	DALE AND SOUTH MARLOES COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National (and international) nature conservation interest. Rare species, bats in caves, grey seals use caves for pups, otters, nationally rare and scarce lichens, sandy beaches, geologically varied and important cliffs. Important marine areas and sea inlets	National / International	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats (including those supporting shore dock, grey seal) can respond to sea level rise, while long term natural exposure of the geology will be maintained. Thus neutral impact.	
1.1	SSSI	DE PORTH SAIN FFRAID / ST BRIDE'S BAY SOUTH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology, vegetation, invertebrates, grey seals)	National / International	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats (including those supporting grey seal) can respond to sea level rise, while long term natural exposure of the geology will be maintained. Thus neutral impact.	
1.2	SSSI	DE PORTH SAIN FFRAID / ST BRIDE'S BAY SOUTH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology, vegetation, invertebrates, grey seals)	National / International	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats (including those supporting grey seal) can respond to sea level rise, while long term natural exposure of the geology will be maintained. Thus neutral impact.	
2.1	SSSI	ARFORDIR NIWGWL - ABER BACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna	National nature conservation interest (geology, intertidal communities, specialised marine habitats)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats will allow for natural erosion of the coast allowing the mud and sand flats to respond to sea level rise and geological exposure to be maintained. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.1	SSSI	DE PORTH SAIN FFRAID / ST BRIDE'S BAY SOUTH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology, vegetation, invertebrates, grey seals)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats (including those supporting grey seal) can respond to sea level rise, while long term natural exposure of the geology will be maintained. Thus neutral impact.	
2.2	SSSI	ARFORDIR NIWGWL - ABER BACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna	National nature conservation interest (geology, intertidal communities, specialised marine habitats)	National / International	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	MR - Is the preferred policy in epoch 3. At Little Haven MR will allow the defence line to be moved back within the constraints of the hard rock cliff forming the narrow valley, avoiding coastal squeeze and impacts to the interest features of the SSSI. Thus moderate positive impact.	Habitat creation.
			Earth Heritage, Soils and Geology GCR	National nature conservation interest (geology). The special geological interests consist of exposures of Upper Westphalian rocks, a section through the Irish Sea till deposits and two important exposures of features developed during the Variscan orogeny. The site extends south of the popular tourist beach at Newgale on the north-east of St Brides Bay coastline, to Little Haven in the south-east.		HTL - Should not result in loss of geological exposure. Thus neutral impact.	HTL - Should not result in loss of geological exposure. Thus neutral impact.	MR - Policy for this unit may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate. Thus minor negative impact.	No mitigation available at this strategic level which is based on worst case scenario. However, at scheme level better design will try and ensure exposure of geological site and continued natural processes.
2.3	SSSI	ARFORDIR NIWGWL - ABER BACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National nature conservation interest (geology, intertidal communities, specialised marine habitats)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats will allow for natural erosion of the coast allowing the mud and sand flats to respond to sea level rise and geological exposure to be maintained. Thus neutral impact.	
2.4	SSSI	ARFORDIR NIWGWL - ABER BACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna	National nature conservation interest (geology, intertidal communities, specialised marine habitats)	National	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	HTL - Could result in loss of intertidal communities/habitats and geological exposure. Thus major negative impact.	MR - Is the preferred policy in epoch 3. The MR policy will allow the coastal processes to return to a more natural state through sustainable management. Thus major positive impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.5	SSSI	ARFORDIR NIWGWL - ABER BACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna	National nature conservation interest (geology, intertidal communities, specialised marine habitats)	National / International	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	MR - Is the preferred policy. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	NAI - Being the preferred policy for epoch 3, this would continue to allow processes to return to a natural state in the long term maintaining the condition of the SSSI interest features. Thus neutral impact.	Habitat creation.
2.6	SSSI	ARFORDIR NIWGWL - ABER BACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna	National nature conservation interest (geology, intertidal communities, specialised marine habitats)	National / international	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	MR - Is the preferred policy in epoch 3. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	Habitat creation.
2.7	SSSI	ARFORDIR NIWGWL - ABER BACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna	National / International nature conservation interest (geology, intertidal communities, specialised marine habitats)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats will allow for natural erosion of the coast allowing the mud and sand flats to respond to sea level rise and geological exposure to be maintained. Thus neutral impact.	
2.8	SSSI	ARFORDIR NIWGWL - ABER BACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna	National nature conservation interest (geology, intertidal communities, specialised marine habitats)	National / International	HTL - Could result in loss of intertidal communitie/habitats. Thus major negative impact.	MR - Is the preferred policy for the middle and last epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for the middle and last epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	Habitat creation.
			Earth Heritage, Soils and Geology GCR	National nature conservation - interest (geology) . The special geological interests consist of exposures of Upper Westphalian rocks, a section through the Irish Sea till deposits and two important exposures of features developed during the Variscan orogeny. The site extends south of the popular tourist beach at Newgale on the north-east of St Brides Bay coastline, to Little Haven in the south- east.		HTL - Should not result in loss of geological exposure. Thus neutral impact.	MR - Policy for this unit may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate. Thus minor negative impact.	MR - Policy for this unit may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate. Thus minor negative impact.	No mitigation available at this strategic level which is based on worst case scenario. However, at scheme level better design will try and ensure exposure of geological site and continued natural processes.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.9	SSSI	ARFORDIR NIWGWL - ABERBACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology, intertidal communities, specialised marine habitats)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats will allow for natural erosion of the coast allowing the mud and sand flats to respond to sea level rise and geological exposure to be maintained. Thus neutral impact.	
2.10	SSSI	ARFORDIR NIWGWL - ABERBACH / NEWGALE TO LITTLE HAVEN COAST	Biodiversity, Flora and Fauna	National nature conservation interest (geology, intertidal communities, specialised marine habitats)	National / International	MR - Is the preferred policy for all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	
			Earth Heritage, Soils and Geology GCR	National nature conservation interest (geology). The special geological interests consist of exposures of Upper Westphalian rocks, a section through the Irish Sea till deposits and two important exposures of features developed during the Variscan orogeny. The site extends south of the popular tourist beach at Newgale on the north-east of St Brides Bay coastline, to Little Haven in the south-east.		MR - Policy for this unit may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate. Thus minor negative impact.	MR - Policy for this unit may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate. Thus minor negative impact.	MR - Policy for this unit may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate. Thus minor negative impact.	No mitigation available at this strategic level which is based on worst case scenario. However, at scheme level better design will try and ensure exposure of geological site and continued natural processes.
2.12	SSSI	ST. DAVID'S PENINSULA COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (ecology/habitat and geology)	National	MR -geological features are the key value in this PU, and limited erosion currently takes place as the cliff extends inland. MR would not affect the existing processes acting on the cliff. Thus neutral impact.	MR - Is the preferred policy for the middle and last epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for the middle and last epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	Change in policy from HTL to MR in first epoch.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.13	SSSI	ST. DAVID'S PENINSULA COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (ecology/habitat and geology)	National	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	
3.1	SSSI	ST. DAVID'S PENINSULA COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (ecology/habitat and geology)	National / International	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	
3.1	SSSI	ARFORDIR ABEREIDDI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest - Geological and marine biological features/ habitats (e.g. GCR blocks, grey seals, sea caves)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats will allow for natural erosion of the coast and geological exposure to be maintained. Thus neutral impact.	
3.1	SSSI	STRUMBLE HEAD - LLECHDAFAD CLIFFS	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest - Geological, botanical and marine biological features	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as habitats will allow for natural erosion of the coast and geological exposure to be maintained. Thus neutral impact.	
3.3	SSSI	ST. DAVID'S PENINSULA COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (ecology/habitat and geology)	National / International	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	Re-creation of habitat
3.4	SSSI	ST. DAVID'S PENINSULA COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (ecology/habitat and geology)	National / International	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	NAI - Although this policy will result in NAI, this will not preclude local management subject to normal approvals which may impact upon natural processes along this section of the coast for this epoch. Thus minor negative impact.	NAI - Although this policy will result in NAI, this will not preclude local management subject to normal approvals which may impact upon natural processes along this section of the coast for this epoch. Thus minor negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.5	SSSI	ST. DAVID'S PENINSULA COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (ecology/habitat and geology)	National / International	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	HTL - Could result in loss of intertidal communities / habitats. Thus major negative impact.	Habitat creation.
3.6	SSSI	ST. DAVID'S PENINSULA COAST	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (ecology/habitat and geology)	National / International	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, this will allow for rocky ledges to develop naturally due to erosion in the long term. Thus neutral impact.	
3.8	SSSI	ST. DAVID'S PENINSULA COAST	Biodiversity, Flora and Fauna, and Earth Heritage	National nature conservation interest (ecology/habitat and geology)	National	HTL - intent is to not create additional defences but to allow existing to deteriorate in this epoch until the realignment of assets takes place in the following epoch. Although potential constraint to intertidal habitat could occur, this would be extremely limited in scale. Thus moderate negative impact.	MR - Is the preferred policy for the middle and last epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for the middle and last epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	
				National nature conservation interest (ecology/habitat and geology)		HTL - intent is to not create additional defences but to allow existing to deteriorate in this epoch until the realignment of assets takes place in the following epoch. No obstruction would occur on the geological interest. Thus neutral impact.	MR - Is the preferred policy for the middle and last epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for the middle and last epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.9	SSSI	ARFORDIR ABEREIDDI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National (and international) nature conservation interest - Geological and marine biological features/ habitats (e.g. GCR blocks, grey seals, sea caves)	National / International	MR - Is the preferred policy for all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	
				National (and international) nature conservation interest - Geological and marine biological features/ habitats (e.g. GCR blocks , grey seals, sea caves)		MR - No geological interest would be affected by the managed realignment of assets and where relevant reducing the extent of erosion within this location. Thus neutral impact.	MR - No geological interest would be affected by the managed realignment of assets and where relevant reducing the extent of erosion within this location. Thus neutral impact.	MR - No geological interest would be affected by the managed realignment of assets and where relevant reducing the extent of erosion within this location. Thus neutral impact.	
3.12	SSSI	ABER MAWR	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. However, annual losses to the sea due to erosion do naturally occur along this site. Thus, neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. However, annual losses to the sea due to erosion do naturally occur along this site. Thus, neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. However, annual losses to the sea due to erosion do naturally occur along this site. Thus, neutral impact.	Document and recording of features may be required for this site.
4.4	SSSI	CREIGIAU ABERGWAUN (FISHGUARD CLIFFS)	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as natural exposure of the geology will be maintained. Thus neutral impact.	
4.5	SSSI	CREIGIAU ABERGWAUN (FISHGUARD CLIFFS)	Earth Heritage, Soils and Geology (GCR)	National/International nature conservation interest (geology)	National / International	HTL -Supporting the coastal slope at this location is not expected to affect the cliff exposures as these are intended for the coastal slope adjacent to the road outside the Site. Thus, neutral impact.	HTL -Supporting the coastal slope at this location is not expected to affect the cliff exposures as these are intended for the coastal slope adjacent to the road outside the Site. Thus, neutral impact.	HTL -Supporting the coastal slope at this location is not expected to affect the cliff exposures as these are intended for the coastal slope adjacent to the road outside the Site. Thus, neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.7	SSSI	CREIGIAU ABERGWAUN (FISHGUARD CLIFFS)	Earth Heritage, Soils and Geology (GCR)	National/International nature conservation interest (geology)	National / International	HTL -Supporting the coastal slope at this location is not expected to affect the cliff exposures as these are intended for the coastal slope adjacent to the road outside the Site. Thus, neutral impact.	HTL -Supporting the coastal slope at this location is not expected to affect the cliff exposures as these are intended for the coastal slope adjacent to the road outside the Site. Thus, neutral impact.	HTL -Supporting the coastal slope at this location is not expected to affect the cliff exposures as these are intended for the coastal slope adjacent to the road outside the Site. Thus, neutral impact.	
4.8	SSSI	CREIGIAU ABERGWAUN (FISHGUARD CLIFFS)	Earth Heritage, Soils and Geology (GCR)	National/International nature conservation interest (geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. No significant effect in the long term as natural exposure of the geology will be maintained. Thus neutral impact.	
4.18	SSSI	NEWPORT CLIFFS	Biodiversity, Flora and Fauna	National nature conservation interest (vegetated sea cliffs, breeding birds, grey seals, sea caves)	National	HTL - In the short term the defence is not seen as having a significant impact on the natural behavior of the whole frontage and over epoch one this defence could be maintained. Thus neutral impact.	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
4.19	SSSI	NEWPORT CLIFFS	Biodiversity, Flora and Fauna	National nature conservation interest (vegetated sea cliffs, breeding birds, grey seals, sea caves)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
5.1	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.1	SSSI	NEWPORT CLIFFS	Biodiversity, Flora and Fauna	National nature conservation interest (vegetated sea cliffs, breeding birds, grey seals, sea caves)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
5.2	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
5.3	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats, dolphins, seals, invertebrates)	National	MR - Is the preferred policy for the all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for the all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for the all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	
5.3	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (ecology/habitat and geomorphology)	National	MR - Is the preferred policy for the all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for the all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	MR - Is the preferred policy for the all three epochs. The MR policy will allow the coastal processes to return to a more natural state through sustainable management maintaining the condition of the SSSI interest features. Thus neutral impact.	
5.4	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (ecology/habitat and geomorphology)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected maintaining the condition of the SSSI interest features. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected maintaining the condition of the SSSI interest features. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected maintaining the condition of the SSSI interest features. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.5	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (ecology/habitat and geomorphology)	National	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	
5.6	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (ecology/habitat and geomorphology)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected maintaining the condition of the SSSI interest features. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected maintaining the condition of the SSSI interest features. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected maintaining the condition of the SSSI interest features. Thus neutral impact.	
5.7	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (ecology/habitat and geomorphology)	National	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. Thus neutral impact.	
5.8	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - May result in loss of intertidal habitat within the estuary, however, as this is a populated area, it is unlikely that habitats for some of the SSSI interest features will be used such as seal haul out sites. Other interest features will not be influenced by this policy for this unit. Thus neutral impact.	HTL - May result in loss of intertidal habitat within the estuary, however, as this is a populated area, it is unlikely that habitats for some of the SSSI interest features will be used such as seal haul out sites. Other interest features will not be influenced by this policy for this unit. Thus neutral impact.	HTL - May result in loss of intertidal habitat within the estuary, however, as this is a populated area, it is unlikely that habitats for some of the SSSI interest features will be used such as seal haul out sites. Other interest features will not be influenced by this policy for this unit. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.8	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geomorphology)	National	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. Thus neutral impact.	
5.9	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
5.9	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geomorphology)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
5.10	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geomorphology)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
5.11	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geomorphology)	National	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.12	SSSI	AFON TEIFI	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geomorphology)	National	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	HTL - The policy along the majority of the remaining estuary/river will result in coastal squeeze and a loss of intertidal habitat, however there will be no loss of the watercourse habitat. The key areas of fluvial geomorphology interests are out of the SMP boundary. Thus neutral impact.	
5.15	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
5.15	SSSI	CAEAU CRUG BYCHAN, TY GWYN A LLWYN YSGAW	Biodiversity, Flora and Fauna	National nature conservation interest (botanical - Species-rich wild plant community)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
6.1	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
6.2	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - Significant coastal squeeze and loss of beach habitat may be observed at Aberporth over all 3 epochs as a result of the HTL policy, however the SSSI interest features will not be effected. Thus neutral impact.	HTL - Significant coastal squeeze and loss of beach habitat may be observed at Aberporth over all 3 epochs as a result of the HTL policy, however the SSSI interest features will not be effected. Thus neutral impact.	HTL - Significant coastal squeeze and loss of beach habitat may be observed at Aberporth over all 3 epochs as a result of the HTL policy, however the SSSI interest features will not be effected. Monitoring of sediment extents along the foreshore may be required over the long term. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
6.3	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
6.4	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - Policy will not impact upon the SSSI interest features along this shoreline frontage. Thus neutral impact.	MR - Policy will not impact upon the SSSI interest features along this shoreline frontage. Thus neutral impact.	MR - Policy will not impact upon the SSSI interest features along this shoreline frontage. Thus neutral impact.	
6.5	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
6.6	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - Policy will not impact upon the SSSI interest features along this shoreline frontage. Thus neutral impact.	MR - Policy will not impact upon the SSSI interest features along this shoreline frontage. Thus neutral impact.	MR - Policy will not impact upon the SSSI interest features along this shoreline frontage. Thus neutral impact.	
6.7	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
6.8	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - Significant coastal squeeze and loss of beach habitat may be observed at Aberporth over all 3 epochs as a result of the HTL policy, however the SSSI interest features will not be effected. Thus neutral impact.	HTL - Significant coastal squeeze and loss of beach habitat may be observed at Aberporth over all 3 epochs as a result of the HTL policy, however the SSSI interest features will not be effected. Thus neutral impact.	NAI - Being the preferred policy, natural processes will continue and therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
7.1	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	NAI - Being the preferred policy, natural processes will continue and therefore no direct or indirect effects on the SSSI interest features (including geology is expected) as a result of coastal management policy is expected. Thus neutral impact.	
7.2	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	
7.3	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	
7.4	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	MR - Policy will not influence the interest features associated with this SSSI. Thus minor negative impact.	
7.5	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	MR - SSSI interest features will not be effected under this policy. Thus neutral impact.	
7.6	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
8.1	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	Currently undefended and undeveloped cliffs. Do nothing policy is attended for this policy unit. Thus neutral impact.	Currently undefended and undeveloped cliffs. Do nothing policy is attended for this policy unit. Thus neutral impact.	Currently undefended and undeveloped cliffs. Do nothing policy is attended for this policy unit. Thus neutral impact.	
8.2	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	MR - SSSI interest features will not be effected under this policy. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
8.3	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	
8.4	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	
8.5	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
8.6	SSSI	ABERARTH - CARREG WYLAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat and geology e.g. maritime habitats - caves, dolphins, seals, invertebrates)	National	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	MR - SSSI interest features will not be effected under this policy. Thus neutral impact.	MR - SSSI interest features will not be effected under this policy. Thus neutral impact.	
8.7	SSSI	CREIGIAU ABERARTH-MORFA	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National nature conservation interest (ecology/habitat and geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
8.7	SSSI	TRAETH LLANON	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (ecology/habitat and geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
8.8	SSSI	TRAETH LLANON	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (ecology/habitat and geology)	National / International	MR - Policy is slowing retreat. Erosion rates associated with the geological interest feature of this SSSI would be of a slower rate. Thus minor negative impact.	MR - Policy is slowing retreat. Erosion rates associated with the geological interest feature of this SSSI would be of a slower rate. Thus minor negative impact.	MR - Policy is slowing retreat. Erosion rates associated with the geological interest feature of this SSSI would be of a slower rate. Thus minor negative impact.	No mitigation available at this strategic level which is based on worst case scenario. However, at scheme level better design will try and ensure exposure of geological site and continued natural processes.
9.1	SSSI	CREIGIAU CWM-CERIW A FFOS-LAS (MORFA BYCHAN)	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	
9.1	SSSI	CREIGIAU PEN Y GRAIG	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	
9.1	SSSI	ALLT WEN A TRAETH TANYBWLCH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National nature conservation interest (biology - e.g. sparse coastal heath associated with sand and shingle spit / geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
9.2	SSSI	ALLT WEN A TRAETH TANYBWLCH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (biology - e.g. sparse coastal heath associated with sand and shingle spit / geology)	National	MR - Policy for this unit may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate. Thus minor negative impact.	MR - Policy for this unit may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate. Thus minor negative impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest feature (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	No mitigation available at this strategic level which is based on worst case scenario. However, at scheme level better design will try and ensure exposure of geological site and continued natural processes.
9.3	SSSI	ALLT WEN A TRAETH TANYBWLCH	Earth Heritage, Soils and Geology	National nature conservation interest (biology - e.g. sparse coastal heath associated with sand and shingle spit / geology)	National	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI interest features will not be effected under this policy. Thus neutral impact.	
9.10	SSSI	CRAIGYFULFRAN & CLARACH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology)	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features (e.g. reduced exposure of geology) as a result of coastal management policy is expected. Thus neutral impact.	
9.11	SSSI	BORTH - CLARACH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (biology and geology)	National / International	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	
9.11	SSSI	CRAIGYFULFRAN & CLARACH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest (geology)	National / International	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Thus neutral impact.	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Thus neutral impact.	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
9.12	SSSI	BORTH - CLARACH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (biology and geology)	National	NAI - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	NAI - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	NAI - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	
9.13	SSSI	BORTH - CLARACH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (biology and geology)	National	NAI - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	NAI - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	NAI - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	
10.1	SSSI	BORTH - CLARACH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest (biology and geology)	National	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	MR - Policy for this unit will allow the actively eroding cliffs to continue to erode. Other interest features will not be effected by this policy Thus neutral impact.	
10.3	SSSI	DYFI	Biodiversity, Flora and Fauna	National nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National / International	HTL - Potential loss of intertidal habitat such as sandflats/saltmarsh could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Policy for this unit may reduce the effects of coastal squeeze associated with epoch 1, though the rate of habitat loss or creation is unknown, and hence a possible risk remains. Thus moderate negative impact.	MR - Policy for this unit may further reduce the effects of coastal squeeze associated with epoch 1/2, however this would still occur at a relatively slow rate with continued possible loss of habitat. Thus minor negative impact.	Habitat creation.
			Earth Heritage, Soils and Geology (GCR)	National nature conservation interest - Geology , coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features		HTL - No significant increase in rate of erosion of the submerged forest is expected in this epoch. Thus neutral impact.	MR - Will enable movement and response of beach to SLR and hence no significant erosion to submerged forest is expected. Thus neutral impact.	MR - Will enable movement and response of beach to SLR and hence no significant erosion to submerged forest is expected. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.4	SSSI	DYFI	Biodiversity, Flora and Fauna	National nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National / international	MR - Policy for this unit may reduce the effects of coastal squeeze, however this would occur at a relatively slow rate with continued possible loss of habitat. Thus minor negative impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	Habitat creation.
			Earth Heritage, Soils and Geology (GCR)	National (and international) nature conservation interest - Geology , coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features		MR - Movement of the beach sediments would occur along with roll back, and no additional erosion is expected Thus neutral impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the geological exposure associated with the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the geological exposure associated with the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
10.5 / 6	SSSI	DYFI	Biodiversity, Flora and Fauna	National nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National / international	HTL - Potential loss of habitat for example saltmarsh under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat for example saltmarsh under this policy in response to coastal squeeze. Thus major negative impact.	MR - The policy of MR in the final epoch would be expected to significantly increase the area of both estuary and intertidal habitats. Thus minor positive impact.	Habitat creation.
			Earth Heritage, Soils and Geology (GCR)	National (and international) nature conservation interest - Geology , coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features		HTL - Policy is not expected to affect the geomorphological processes within this epoch. Thus neutral impact.	HTL - Policy is not expected to affect the geomorphological processes in the tide range below the spring tide levels within this epoch. Thus neutral impact.	MR - with SLR the MR policy will not prevent or disturb the geomorphological processes within the estuary or on the spit. Thus neutral impact.	
10.7	SSSI	DYFI	Biodiversity, Flora and Fauna	National nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National / International	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Could create additional habitat (fen, marsh) over the long term and reduce the scale of the potential impact. Thus minor positive impact.	Habitat creation.
			Earth Heritage, Soils and Geology (GCR)	National (and international) nature conservation interest - Geology , coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features		HTL - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	HTL - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	MR - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.10	SSSI	DYFI	Biodiversity, Flora and Fauna	National nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National / International	MR - Could create additional intertidal habitat over the long term and reduce the scale of the potential impact. Thus minor positive impact.	MR - Could create additional intertidal habitat over the long term and reduce the scale of the potential impact. Thus minor positive impact.	MR - Could create additional intertidal habitat over the long term and reduce the scale of the potential impact. Thus minor positive impact.	
			Earth Heritage, Soils and Geology (GCR)	National (and international) nature conservation interest - Geology , coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features		MR - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	MR - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	MR - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	
10.11	SSSI	DYFI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National (and international) nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National / International	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	Habitat creation.
10.12	SSSI		Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National (and international) nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National / International	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	Habitat creation.
10.13	SSSI	DYFI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.14	SSSI	DYFI	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National	MR - Potential loss of freshwater habitats. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	MR - Potential loss of freshwater habitats. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	MR - Potential loss of freshwater habitats. Thus major negative impact. Outside of key geological interest area associated with Ynyslas and Borth.	Habitat creation.
10.15	SSSI	DYFI	Biodiversity, Flora and Fauna	National nature conservation interest - Geology, coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	National /International	MR - Will allow for natural succession and development within the dunes and the intertidal shoreline, therefore it can be concluded that there will be no major impact. Thus neutral impact.	MR - Will allow for natural succession and development within the dunes and the intertidal shoreline, therefore it can be concluded that there will be no major impact. Thus neutral impact.	MR - Will allow for natural succession and development within the dunes and the intertidal shoreline, therefore it can be concluded that there will be no major impact. Thus neutral impact.	
			Earth Heritage, Soils and Geology (GCR)	National (and international) nature conservation interest - Geology , coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features		MR - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	MR - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	MR - Outside of key geological interest area associated with Ynyslas and Borth. Thus neutral impact.	
10.17	SSSI	BROADWATER	Biodiversity, Flora and Fauna	National nature conservation interest - Tidal lagoon, saltmarsh, shingle spit, mudflats, pools, reedbeds, ditches and the river	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. sandflats) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of intertidal habitat / saltmarsh along the inner estuary could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.
10.18	SSSI	BROADWATER	Biodiversity, Flora and Fauna	National nature conservation interest - Tidal lagoon, saltmarsh, shingle spit, mudflats, pools, reedbeds, ditches and the river	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. sandflats) could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Could create additional habitat (e.g. reedbed and saltmarsh) over the long term and reduce the scale of the potential impact. Thus minor positive impact.	MR - Could create additional habitat (e.g. reedbed and saltmarsh) over the long term and reduce the scale of the potential impact. Thus minor positive impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.18	SSSI	GLANNAU TONFANAU I FRIOG	Biodiversity, Flora and Fauna	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin	National / International	HTL - Should have no impact upon the biological/habitat interest features of this SSSI along this section of the coastline. Thus neutral impact.	MR - Should have no impact upon the biological/habitat interest features of this SSSI along this section of the coastline. Thus neutral impact.	MR - Should have no impact upon the biological/habitat interest features of this SSSI along this section of the coastline. Thus neutral impact.	
			Earth Heritage, Soils and Geology (GCR)	National (and international) nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin		HTL - Policy intent is not to provide new structures rather to let the existing structures decay, and these are outside the area influencing the geological exposures in the foreshore and cliff at the north end of the unit. Thus, neutral impact.	MR - Policy intent is not to provide new structures rather to let the existing structures decay, and these are outside the area influencing the geological exposures in the foreshore and cliff at the north end of the unit. Thus, neutral impact.	MR - Policy intent is not to provide new structures rather to let the existing structures decay, and these are outside the area influencing the geological exposures in the foreshore and cliff at the north end of the unit. Thus, neutral impact.	
10.19	SSSI	GLANNAU TONFANAU I FRIOG	Biodiversity, Flora and Fauna	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin	National	MR - Should have no impact upon the biological/habitat interest features of this SSSI along this section of the coastline. Thus neutral impact.	MR - Should have no impact upon the biological/habitat interest features of this SSSI along this section of the coastline. Thus neutral impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the biological/habitat SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin		MR - Exposures of foreshore and cliff deposits will continue without obstruction in this policy. Thus, neutral impact.	MR - Exposures of foreshore and cliff deposits will continue without obstruction in this policy. Thus, neutral impact.	NAI - Natural process of geological deposit exposure will continue. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.01	SSSI	GLANNAU TONFANAU I FRIOG	Biodiversity, Flora and Fauna	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin)	National	HTL - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	HTL - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	HTL - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin)		HTL - Potential reduction in the rate of cliff recession may occur in this epoch, though at present this is considered negligible in this epoch. Thus, neutral impact.	HTL - Reduction in rate of exposure associated with geological interest component of this SSSI. Thus, major negative impact.	HTL - Reduction in rate of exposure associated with geological interest component of this SSSI. Thus, major negative impact.	No mitigation available at this strategic level which is based on worst case scenario. However, at scheme level better design will try and ensure exposure of geological site and continued natural processes.
11.20	SSSI	GLANNAU TONFANAU I FRIOG	Biodiversity, Flora and Fauna	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin)	National	MR - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	MR - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	MR - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin)		MR - Potential reduction in the rate of cliff recession may occur in this epoch, though at present this is considered negligible in this epoch. Thus, neutral impact.	MR - Potential reduction in the rate of cliff recession may occur in this epoch, though at present this is considered negligible in this epoch. Thus, neutral impact.	MR - Potential reduction in the rate of cliff recession may occur in this epoch, though at present this is considered negligible in this epoch. Thus, neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.3	SSSI	GLANNAU TONFANAU I FRIOG	Biodiversity, Flora and Fauna	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin)	National / International	HTL - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	HTL - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	HTL - The current defence of high ground will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy. Thus neutral impact.	
			Earth Heritage, Soils and Geology (GCR)	National (and international) nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm Sabellaria alveolata biogenic reefs, and its associated highly diverse corallin)		HTL - Potential reduction in the rate of cliff recession may occur in this epoch, though at present this is considered negligible in this epoch. Thus, neutral impact.	HTL -Reduction in rate of exposure associated with geological interest component of this SSSI. Thus, major negative impact.	HTL -Reduction in rate of exposure associated with geological interest component of this SSSI. Thus, major negative impact.	No mitigation available at this strategic level which is based on worst case scenario. However, at scheme level better design will try and ensure exposure of geological site and continued natural processes.
11.4	SSSI	ABER MAWDDACH/MAWDDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. muddy sediments, sandflats) could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Could allow for the habitats of the SSSI to move landward in the long term. Thus minor positive impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	Habitat creation.
11.5	SSSI	ABER MAWDDACH/MAWDDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	MR - Could allow for the habitats of the SSSI to move landward in the long term. Thus minor positive impact.	MR - Could allow for the habitats of the SSSI to move landward in the long term. Thus minor positive impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.6	SSSI	ABER MAWDDACH/MAW DDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh) could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Could allow for the habitats of the SSSI including saltmarsh to move landward in the long term. Thus minor positive impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	Habitat creation.
11.8	SSSI	ABER MAWDDACH/MAW DDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh) could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.
11.9	SSSI	ABER MAWDDACH/MAW DDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh) could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term, however for some features such as freshwater bogs may be impacted upon by MR, however this will depend on the scope and design. Thus minor negative impact.	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term, however for some features such as freshwater bogs may be impacted upon by MR, however this will depend on the scope and design. Thus minor negative impact.	Habitat creation.
11.10	SSSI	ABER MAWDDACH/MAW DDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term. Thus minor positive impact.	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term. Thus minor positive impact.	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term. Thus minor positive impact.	
11.11	SSSI	ABER MAWDDACH/MAW DDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh, reedbeds) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh, reedbeds) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh, reedbeds) could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.12	SSSI	ABER MAWDDACH/MAW DDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh, reedbeds) could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term. Thus minor positive impact.	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term. Thus minor positive impact.	
11.13	SSSI	ABER MAWDDACH/MAW DDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term. Thus minor positive impact.	MR - Could allow for the habitats of the SSSI including saltmarsh, reedbeds to move landward in the long term. Thus minor positive impact.	MR - Overall the MR policy for this unit would be expected to significantly increase the area of both estuary and intertidal habitats within epoch 3. Thus minor positive impact.	
11.14	SSSI	ABER MAWDDACH/MAW DDACH ESTUARY	Biodiversity, Flora and Fauna	National nature conservation interest (The special features of the site are the estuarine habitats, particularly muddy sediments and saltmarshes, reed beds and raised mire. There is also a substantial species interest, including breeding wading birds, scarce vascular plants, bryophytes and invertebrates)	National	HTL - Potential loss of estuarine habitats associated with the SSSI interest feature could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of estuarine habitats associated with the SSSI interest feature could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of estuarine habitats associated with the SSSI interest feature could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.
11.19	SSSI	MORFA DYFFRYN	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	MR - Could allow for the habitats of the SSSI including dunes to move landward / roll back in the long term. Thus minor positive impact.	MR - Could allow for the habitats of the SSSI including dunes to move landward / roll back in the long term. Thus minor positive impact.	MR - Could allow for the habitats of the SSSI including dunes to move landward / roll back in the long term. Thus minor positive impact.	
11.20	SSSI	MORFA DYFFRYN	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.1	SSSI	MORFA DYFFFRYN	Biodiversity, Flora and Fauna	National nature conservation interest - Special interest for biological (terrestrial and marine intertidal) and geomorphological features. The special features of the site include sand dunes, the sea shore, saltmarsh and grassland	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
12.2	SSSI	MORFA DYFFFRYN	Biodiversity, Flora and Fauna	National nature conservation interest - Special interest for biological (terrestrial and marine intertidal) and geomorphological features. The special features of the site include sand dunes, the sea shore, saltmarsh and grassland	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system. This intent would feed through in the approach taken in epoch 1 (HTL) so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system. This intent would feed through in the approach taken in epoch 1 (HTL) so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	Habitat creation.
12.3	SSSI	MORFA DYFFFRYN	Biodiversity, Flora and Fauna	National nature conservation interest - Special interest for biological (terrestrial and marine intertidal) and geomorphological features. The special features of the site include sand dunes, the sea shore, saltmarsh and grassland	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system. This intent would feed through in the approach taken in epoch 1 (HTL) so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system. This intent would feed through in the approach taken in epoch 1 (HTL) so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	Habitat creation.
12.4	SSSI	MORFA DYFFFRYN	Biodiversity, Flora and Fauna	National nature conservation interest - Special interest for biological (terrestrial and marine intertidal) and geomorphological features. The special features of the site include sand dunes, the sea shore, saltmarsh and grassland	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.5	SSSI	MORFA DYFFFRYN	Biodiversity, Flora and Fauna	National nature conservation interest - Special interest for biological (terrestrial and marine intertidal) and geomorphological features. The special features of the site include sand dunes, the sea shore, saltmarsh and grassland	National	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	
12.6	SSSI	MORFA DYFFFRYN	Biodiversity, Flora and Fauna	National nature conservation interest - Special interest for biological (terrestrial and marine intertidal) and geomorphological features. The special features of the site include sand dunes, the sea shore, saltmarsh and grassland	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.
12.7	SSSI	MORFA HARLECH	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	
12.8	SSSI	MORFA HARLECH	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh / intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.9	SSSI	MORFA HARLECH	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system. This intent would feed through in the approach taken in epoch 1 (HTL) so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	MR - Specifically aims to avoid further extension of hard defence along this frontage with the aim to allow some control but also roll back of the dune system. This intent would feed through in the approach taken in epoch 1 (HTL) so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus minor positive impact.	Habitat creation.
12.10	SSSI	MORFA HARLECH	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	
12.12	SSSI	MORFA HARLECH	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	
12.13	SSSI	MORFA HARLECH	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.
12.14	SSSI	MORFA HARLECH	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	HTL - Potential loss of habitat associated with the SSSI interest feature (e.g. saltmarsh/ intertidal habitat) could occur under this policy in response to coastal squeeze. Thus major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.15	SSSI	MORFA HARLECH	Biodiversity, Flora and Fauna	National nature conservation interest - Biological (terrestrial and marine intertidal) and geomorphological features (sand dunes)	National	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	NAI - This policy will allow the dunes to respond naturally to sea level rise – and any loss as a result of erosion to this or other features, would not be as a result of SMP2 policy. Thus neutral impact.	
12.15	SSSI	TIROEDD A GLANNAU RHWNG CRICIETH AC AFON GLASLYN	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
12.17	SSSI	TIROEDD A GLANNAU RHWNG CRICIETH AC AFON GLASLYN	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, marine biological, wetland and dune interest features	National / International	HTL - SSSI biological / habitat interest features will not be effected under this policy. Thus neutral impact.	MR - SSSI biological / habitat interest features will not be effected under this policy. Thus neutral impact.	MR - SSSI biological / habitat interest features will not be effected under this policy. Thus neutral impact.	
			Earth Heritage, Soils and Geology (GCR)	National (and international) nature conservation interest - Geological , marine biological, wetland and dune interest features		HTL - during this epoch no constraint is expected on erosion to the foreshore and cliff deposits. Thus, neutral impact.	MR - realignment will allow exposure of geological deposits at natural rate. Thus, neutral impact.	MR - realignment will allow exposure of geological deposits at natural rate. Thus, neutral impact.	
12.18	SSSI	TIROEDD A GLANNAU RHWNG CRICIETH AC AFON GLASLYN	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, marine biological, wetland and dune interest features	National	HTL - SSSI biological / habitat interest features will not be effected under this policy. Thus neutral impact.	HTL - SSSI biological / habitat interest features will not be effected under this policy. Thus neutral impact.	MR - SSSI biological / habitat interest features will not be effected under this policy. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological , marine biological, wetland and dune interest features		HTL - during this epoch no constraint is expected on erosion to the cliff deposits in this unit. Thus, neutral impact.	HTL - May result in the loss of a limited frontage of the site which is generally not exposed due to the set back nature and elevated beach levels. Thus, moderate negative impact.	MR - realignment will allow exposure of geological deposits to continue. Thus, neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.19	SSSI	GLANLLYNNAU A GLANNAU PEN-YCHAIN I GRICIETH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology GCR)	National / International nature conservation interest -Geological, botanical and marine biological features	National / International	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Will allow features of the SSSI to continue to respond naturally to sea level rise. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Will allow features of the SSSI to continue to respond naturally to sea level rise. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Will allow features of the SSSI to continue to respond naturally to sea level rise. Thus neutral impact.	
12.21	SSSI	GLANLLYNNAU A GLANNAU PEN-YCHAIN I GRICIETH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest - Geological, botanical and marine biological features	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
12.22	SSSI	GLANLLYNNAU A GLANNAU PEN-YCHAIN I GRICIETH	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	MR - May increase the extent or areas of sand habitat and associated biological interest species dependant of this habitat. Thus minor positive.	NAI - Being the preferred policy , therefore no direct or indirect effects on the biological SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy , therefore no direct or indirect effects on the biological SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological , botanical and marine biological features		MR - This policy will include alignment of the railway however this will not influence the natural extent and exposure of the geological interest component of this SSSI. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the geological SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
12.23	SSSI	GLANLLYNNAU A GLANNAU PEN-YCHAIN I GRICIETH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest - Geological, botanical and marine biological features	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.24	SSSI	GLANLLYNNAU A GLANNAU PEN-YCHAIN I GRICIETH	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	HTL - SSSI biological /geological interest features will not be effected under this policy. Thus neutral impact.	MR - May increase the extent or areas of sand habitat and associated biological interest species dependant of this habitat. Thus minor positive.	MR - May increase the extent or areas of sand habitat and associated biological interest species dependant of this habitat. Thus minor positive.	
12.25	SSSI	GLANLLYNNAU A GLANNAU PEN-YCHAIN I GRICIETH	Biodiversity, Flora and Fauna (and Earth Heritage, Soils and Geology)	National nature conservation interest - Geological, botanical and marine biological features	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Changes in freshwater extents or potential saline intrusion associated with water body near Holiday Camp would be of natural processes and not SMP management policy. Thus neutral impact.	
12.25	SSSI	MORFA ABERERCH	Biodiversity, Flora and Fauna	National nature conservation interest - The site is therefore important for the succession of plant communities on shingle, dune and floodplain which reflect changes in both substrate type and the degree of maritime influence	National	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for all three epochs, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
13.1	SSSI	MORFA ABERERCH	Biodiversity, Flora and Fauna		National	NAI - SMP policy will ensure nature conservation interests of the SSSI are maintained through promoting natural processes. Therefore neutral impact.	NAI - SMP policy will ensure nature conservation interests of the SSSI are maintained through promoting natural processes. Therefore neutral impact.	NAI - SMP policy will ensure nature conservation interests of the SSSI are maintained through promoting natural processes. Therefore neutral impact.	
13.4	SSSI	MYNYDD TIR Y CWMWD A'R GLANNAU AT GARREG YR IMBILL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	HTL - The policy would not impact on any of the SSSI features and the area of the estuary would not be reduced. Therefore a neutral impact.	HTL - The policy would not impact on any of the SSSI features and the area of the estuary would not be reduced. Therefore a neutral impact.	HTL - The policy would not impact on any of the SSSI features and the area of the estuary would not be reduced. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) , botanical and marine biological features		HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.5	SSSI	MYNYDD TIR Y CWMWD A'R GLANNAU AT GARREG YR IMBILL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	HTL - Although there would be a slight reduction in the amount of intertidal habitat in the centre of Pwllheli Harbour as a result of coastal squeeze the policy is unlikely to have a significant affect on any of the SSSI features and the area of the estuary would not be reduced. Therefore a neutral impact.	HTL - Although there would be a slight reduction in the amount of intertidal habitat in the centre of Pwllheli Harbour as a result of coastal squeeze the policy is unlikely to have a significant affect on any of the SSSI features and the area of the estuary would not be reduced. Therefore a neutral impact.	HTL - Although there would be a slight reduction in the amount of intertidal habitat in the centre of Pwllheli Harbour as a result of coastal squeeze the policy is unlikely to have a significant affect on any of the SSSI features and the area of the estuary would not be reduced. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) , botanical and marine biological features		HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	
13.6	SSSI	MYNYDD TIR Y CWMWD A'R GLANNAU AT GARREG YR IMBILL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	HTL - The intertidal and shingle beach supports a number of the SSSI interest features. Under this policy beach width and intertidal habitat extent could be lost in response to SLR. Therefore a major negative impact.	HTL - The intertidal and shingle beach supports a number of the SSSI interest features. Under this policy beach width and intertidal habitat extent could be lost in response to SLR. Therefore a major negative impact.	HTL - The intertidal and shingle beach supports a number of the SSSI interest features. Under this policy beach width and intertidal habitat extent could be lost in response to SLR. Therefore a major negative impact.	Habitat creation.
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) , botanical and marine biological features		HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature							
13.7	SSSI	MYNYDD TIR Y CWMWD A'R GLANNAU AT GARREG YR IMBILL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	HTL - This policy would result in no appreciable change in intertidal habitat extents and is unlikely to have a significant effect on any of the SSSI features. Therefore a neutral impact.	MR - This policy would allow habitats to respond to SLR and would only be of benefit to the SSSI features. Therefore a minor positive impact.	MR - This policy would allow habitats to respond to SLR and would only be of benefit to the SSSI features. Therefore a minor positive impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) , botanical and marine biological features		HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	MR - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	MR - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	
13.8	SSSI	MYNYDD TIR Y CWMWD A'R GLANNAU AT GARREG YR IMBILL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	HTL - This policy would result in no appreciable change in intertidal habitat extents and is unlikely to have a significant effect on any of the SSSI features. Therefore a neutral impact.	MR - This policy would allow habitats to respond to SLR and would only be of benefit to the SSSI features. Therefore a minor positive impact.	MR - This policy would allow habitats to respond to SLR and would only be of benefit to the SSSI features. Therefore a minor positive impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) , botanical and marine biological features		HTL - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	MR - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	MR - The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.9	SSSI	MYNYDD TIR Y CWMWD A'R GLANNAU AT GARREG YR IMBILL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) , botanical and marine biological features		NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. The main geological features of the site are to the west in PU 13.10 on the domed headland of Mynydd Tir y Cwmwd. The policy of this unit will not affect the interest features. Therefore a neutral impact.	
13.10	SSSI	MYNYDD TIR Y CWMWD A'R GLANNAU AT GARREG YR IMBILL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	International and National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) , botanical and marine biological features		NAI - This SSSI has an overlapping GCR site called Llanbedrog associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - This SSSI has an overlapping GCR site called Llanbedrog associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - This SSSI has an overlapping GCR site called Llanbedrog associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
13.12	SSSI	PEN BENAR	Earth Heritage, Soils and Geology	National nature conservation interest - Geology (GCR) associated with Tremadoc Series rocks	International and National	HTL - Would not result in the loss of existing geological exposures. Therefore a neutral impact.	MR - Policy is slowing retreat and realignment of human assets and would not affect the geological interest features of this SSSI. Therefore a neutral impact.	MR - Policy is slowing retreat and realignment of human assets and would not affect the geological interest features of this SSSI. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.14	SSSI	CORS LLYFERIN	Biodiversity, Flora and Fauna	National nature conservation interest - Botanical, and terrestrial ecological features	National	HTL - This policy would protect the SSSI interest features, although under the present day tidal flood risk scenario it is unlikely the SSSI would be significantly affected. Therefore a minor positive impact.	MR - This policy would protect the SSSI features as the dunes would be allowed to roll back providing natural protection. This would require the continued maintenance of the tidal flap. Therefore a minor positive impact.	NAI - Under this policy there is the potential for saline incursion into the SSSI as a result of tidal flood risk. Therefore a moderate negative impact.	Ensure tidal flap maintained to halt saline incursion subject to consultation with CCW.
13.16	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological/geomorphological (GCR) , ornithological, botanical, entomological and marine features		NAI - The SSSI has an associated GCR site called Porth Ceiriad. The interest features for this occur to the west in PU 13.18. The NAI policy would ensure the interest features are maintained. Therefore SMP policy would have no affect. Therefore a neutral impact.	NAI - The SSSI has an associated GCR site called Porth Ceiriad. The interest features for this occur to the west in PU 13.18. The NAI policy would ensure the interest features are maintained. Therefore SMP policy would have no affect. Therefore a neutral impact.	NAI - The SSSI has an associated GCR site called Porth Ceiriad. The interest features for this occur to the west in PU 13.18. The NAI policy would ensure the interest features are maintained. Therefore SMP policy would have no affect. Therefore a neutral impact.	
13.17	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	National	NAI - SMP policy will ensure nature conservation interests of the SSSI are maintained through promoting natural processes. Therefore neutral impact.	NAI - SMP policy will ensure nature conservation interests of the SSSI are maintained through promoting natural processes. Therefore neutral impact.	NAI - SMP policy will ensure nature conservation interests of the SSSI are maintained through promoting natural processes. Therefore neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.18	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological/geomorphological (GCR) , ornithological, botanical, entomological and marine features		NAI - This SSSI has an overlapping GCR site called <i>Porth Ceiriad</i> associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - This SSSI has an overlapping GCR site called <i>Porth Ceiriad</i> associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - This SSSI has an overlapping GCR site called <i>Porth Ceiriad</i> associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.19	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	NAI - Policy will allow the actively eroding cliffs to continue to erode naturally, supplying sediment to the upper foreshore so that sea level rise will not cause the extent of the intertidal exposures to decrease. The sediment supply will also increase the extent of the subtidal reefs in the long term. Atlantic salt meadows are not present in this PU or PDZ. NAI being the preferred policy for this whole will therefore have no direct or indirect effects on the SSSI interest features as a result of coastal management policy. Thus a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological/geomorphological (GCR) , ornithological, botanical, entomological and marine features		NAI - In this PU the SSSI has an overlapping GCR site called Trwyn Llech y Ddol associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI has an overlapping GCR site called Trwyn Llech y Ddol associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI has an overlapping GCR site called Trwyn Llech y Ddol associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
14.1	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological/geomorphological (GCR) , ornithological, botanical, entomological and marine features		NAI - In this PU the SSSI has two overlapping GCR sites called Trwyn Carreg y Tir and Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI has two overlapping GCR sites called Trwyn Carreg y Tir and Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI has two overlapping GCR sites called Trwyn Carreg y Tir and Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
14.2	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological/geomorphological (GCR) , ornithological, botanical, entomological and marine features		NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
14.3	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological/geomorphological (GCR) , ornithological, botanical, entomological and marine features		NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
14.4	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological/geomorphological (GCR) , ornithological, botanical, entomological and marine features		NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
14.5	SSSI	PORTH CEIRIAD, PORTH NEIGWL AC YNYSOEDD SANT TUDWAL	Biodiversity, Flora and Fauna	National nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological/geomorphological (GCR) , ornithological, botanical, entomological and marine features		NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU this SSSI an overlapping GCR site called Porth Neigwl associated with it. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
14.5	SSSI	MYNYDD PENARFYNNYDD	Biodiversity, Flora and Fauna	National nature conservation interest - Geological and ornithological features	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) and ornithological features		NAI - In this PU the Mynydd Penarfynydd SSSI is also designated as a GCR site and also overlaps with the Porth Neigwl GCR. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the Mynydd Penarfynydd SSSI is also designated as a GCR site and also overlaps with the Porth Neigwl GCR. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the Mynydd Penarfynydd SSSI is also designated as a GCR site and also overlaps with the Porth Neigwl GCR. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
14.6	SSSI	MYNYDD PENARFYNNYDD	Biodiversity, Flora and Fauna	National nature conservation interest - Geological and ornithological features	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) features		NAI - In this PU the Mynydd Penarfynydd SSSI is also designated as a GCR site . The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the Mynydd Penarfynydd SSSI is also designated as a GCR site . The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the Mynydd Penarfynydd SSSI is also designated as a GCR site . The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
14.6	SSSI	BENALLT MINE AND NANT Y GADWEN	Earth Heritage, Soils and Geology	National conservation interest - Geological (GCR) features	International and National	NAI - In this PU the SSSI has two overlapping GCR designations associated with it; the <i>Nant Mine</i> and <i>Nant-y-Gadwen</i> . Some of the sites main interest features such as areas of mine spoil lie slightly inland and would not be lost due to erosion. Natural processes which support the geological exposure of interest features would also continue. Therefore a neutral impact.	NAI - In this PU the SSSI has two overlapping GCR designations associated with it; the <i>Nant Mine</i> and <i>Nant-y-Gadwen</i> . Some of the sites main interest features such as areas of mine spoil lie slightly inland and would not be lost due to erosion. Natural processes which support the geological exposure of interest features would also continue. Therefore a neutral impact.	NAI - In this PU the SSSI has two overlapping GCR designations associated with it; the <i>Nant Mine</i> and <i>Nant-y-Gadwen</i> . Some of the sites main interest features such as areas of mine spoil lie slightly inland and would not be lost due to erosion. Natural processes which support the geological exposure of interest features would also continue. Therefore a neutral impact.	
14.6	SSSI	WIG BACH A'R GLANNAU I BORTH ALWM	Biodiversity, Flora and Fauna	National nature conservation interest - Geological and marine biological features, in particular for its rockpool, bedrock overhang and surge gully communities	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
14.7	SSSI	WIG BACH A'R GLANNAU I BORTH ALWM	Biodiversity, Flora and Fauna	National nature conservation interest - Geological and marine biological features , in particular for its rockpool, bedrock overhang and surge gully communities	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological (GCR) and marine biological features, in particular for its rockpool, bedrock overhang and surge gully communities		NAI - In this PU the SSSI is also designated as a GCR site called Wig Bach. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site called Wig Bach. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site called Wig Bach. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
14.9	SSSI	GLANNAU ABERDARON	Biodiversity, Flora and Fauna	National - Botanical, ornithological and geological	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
14.10	SSSI	YNYS ENLLI	Biodiversity, Flora and Fauna	National - Botanical, ornithological and geological	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
14.11	SSSI	GLANNAU ABERDARON	Biodiversity, Flora and Fauna	National - Botanical, ornithological and geological	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National - Botanical, ornithological and geological (GCR)		NAI - In this PU the SSSI has two overlapping GCR designations associated with it; the Braich-y-Pwll to Parwyd and Porth Oer. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI has two overlapping GCR designations associated with it; the Braich-y-Pwll to Parwyd and Porth Oer. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI has two overlapping GCR designations associated with it; the Braich-y-Pwll to Parwyd and Porth Oer. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
14.11	SSSI	PORTH TOWYN I BORTH WEN	Biodiversity, Flora and Fauna	National nature conservation interest - Marine biological importance for its diverse coralline rockpool communities, the presence of a cave community of restricted national distribution and for exhibiting complete zonation of rocky shore communities	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
14.11	SSSI	ABER GEIRCH	Biodiversity, Flora and Fauna	National - Ecology / habitat including fens	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
14.11	SSSI	PORTH DINLLAEN I BORTH PISTYLL	Biodiversity, Flora and Fauna	National - Ecology / habitat and geology	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
15.1	SSSI	CARREG Y LLAM	Biodiversity, Flora and Fauna	National - Ecology, ornithological	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
15.1	SSSI	GALLT Y BWLCH	Biodiversity, Flora and Fauna	National - Botanical	National	NAI - Being the preferred policy for the majority of this unit, will allow continued natural processes and sustain the natural succession of the vegetated cliff habitat. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, will allow continued natural processes and sustain the natural succession of the vegetated cliff habitat. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, will allow continued natural processes and sustain the natural succession of the vegetated cliff habitat. Therefore a neutral impact.	
15.1	SSSI	PORTH DINLLAEN I BORTH PISTYLL	Biodiversity, Flora and Fauna	National - Ecology / habitat and geology	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National - Ecology / habitat and geology (GCR)		NAI - In this PU the SSSI has two overlapping GCR designations associated with it; Penrhyn Nefyn Foreshore Section and Penrhyn Bodeillias. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI has two overlapping GCR designations associated with it; Penrhyn Nefyn Foreshore Section and Penrhyn Bodeillias. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI has two overlapping GCR designations associated with it; Penrhyn Nefyn Foreshore Section and Penrhyn Bodeillias. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
15.1	SSSI	YR EIFL	Biodiversity, Flora and Fauna	National nature conservation interest (ecology -heathland and geology)	International and National	NAI - Being the preferred policy for the majority of this unit, will allow continued natural processes and sustain the natural succession of the vegetated cliff habitat. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, will allow continued natural processes and sustain the natural succession of the vegetated cliff habitat. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, will allow continued natural processes and sustain the natural succession of the vegetated cliff habitat. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology -heathland and geology (GCR))		NAI - In this PU the SSSI is also designated as a GCR site called Trwyn y Gorlech to Yr Eifl Quarries. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site called Trwyn y Gorlech to Yr Eifl Quarries. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site called Trwyn y Gorlech to Yr Eifl Quarries. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
15.1	SSSI	GLANNAU ABERDARON	Biodiversity, Flora and Fauna	National - Botanical, ornithological and geological	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
15.1	SSSI	PORTH TOWYN I BORTH WEN	Biodiversity, Flora and Fauna	National nature conservation interest - Marine biological importance for its diverse coralline rockpool communities, the presence of a cave community of restricted national distribution and for exhibiting complete zonation of rocky shore communities	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
15.2	SSSI	PORTH DINLLAEN I BORTH PISTYLL	Biodiversity, Flora and Fauna	National - Ecology / habitat and geology	National	HTL - There would be no discernable loss of mudflat habitat associated with this policy. Therefore a neutral impact.	MR - The policy in this instance would involve re-alignment of the access road at Morfa Nefyn and would not occur within the site footprint or constrain natural progression of the habitats of SSSI features. Therefore a neutral impact.	MR - The policy in this instance would involve re-alignment of the access road at Morfa Nefyn and would not occur within the site footprint or constrain natural progression of the habitats of SSSI features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
15.3	SSSI	PORTH DINLLAEN BORTH PISTYLL	Biodiversity, Flora and Fauna	National - Ecology / habitat and geology	National	HTL - This policy would not noticeably affect the natural succession of the vegetated cliffs given the existing management. Therefore a neutral impact.	HTL - This policy would not noticeably affect the natural succession of the vegetated cliffs given the existing management. Therefore a neutral impact.	MR - This policy is likely to entail the relocation of properties or other alternative low impact actions and there are unlikely to be any direct or indirect effects as a result of this coastal management policy. Therefore a neutral impact.	
15.4	SSSI	GWYDIR BAY	Earth Heritage, Soils and Geology	Geomorphological interest (GCR).	International and National	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
15.5	SSSI	GWYDIR BAY	Earth Heritage, Soils and Geology	Geomorphological interest (GCR).	International and National	MR - In this PU the SSSI is also designated as a GCR site. The policy is likely to focus on maintaining the pier. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	MR - In this PU the SSSI is also designated as a GCR site. The policy is likely to focus on maintaining the pier. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	MR - In this PU the SSSI is also designated as a GCR site. The policy is likely to focus on maintaining the pier. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
16.2	SSSI	DINAS DINLLE	Earth Heritage, Soils and Geology	Geological (GCR)	International and National	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
16.3	SSSI	DINAS DINLLE	Earth Heritage, Soils and Geology	Geological (GCR)	International and National	HTL - In this PU the SSSI is also designated as a GCR site. Defences will not be installed in front of the headland and the geological exposure of the SSSI would not be affected. Therefore a neutral impact.	MR - In this PU the SSSI is also designated as a GCR site. Policy intent is to manage flood risk to the village. The policy would not interact with the headland and the geological exposure of the SSSI would not be affected. Therefore a neutral impact.	MR - In this PU the SSSI is also designated as a GCR site. Policy intent is to manage flood risk to the village. The policy would not interact with the headland and the geological exposure of the SSSI would not be affected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.4	SSSI	MORFA DINLLE	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat, dune geomorphology)	National	MR - The policy would consist of measures rather than hard defences to sustain dune development and function, thereby sustaining dune development, as the MR policy enables the dunes to develop naturally. Therefore a neutral impact.	MR - The policy would consist of measures rather than hard defences to sustain dune development and function, thereby sustaining dune development, as the MR policy enables the dunes to develop naturally. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
16.5	SSSI	MORFA DINLLE	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat, dune geomorphology)	National	HTL - The policy would not comprise hard defences along the entire frontage but would entail management of the eastern and southeastern site boundary which does not contribute to dune function, and they would not therefore reduce dune development on the western face. Overall this policy is not expected to result in any deterioration of dune processes and features within the site. Therefore a neutral impact.	MR - The policy would consist of measures rather than hard defences to sustain dune development and function, thereby sustaining dune development, as the MR policy enables the dunes to develop naturally. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
16.5	SSSI	Y FORYD	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat)	National	HTL - This policy will result in a loss of intertidal habitat as the sandflats/mudflats are constrained by SLR. Therefore a major negative impact.	MR - The intention of this policy would be to return the bay to a naturally functioning system. Therefore a neutral impact.	NAI - Being the preferred policy will enable the intertidal habitat to respond naturally to the SLR – therefore any of loss of habitat in this epoch will be a result of natural processes and not the SMP2 policy. Therefore a neutral impact.	Habitat creation.
16.6	SSSI	NEWBOROUGH WARREN - YNYS LLANDDWYN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology including coastal geomorphology of Wales)	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology / habitat and geology (GCR) including coastal geomorphology of Wales)		NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.7	SSSI	NEWBOROUGH WARREN - YNYS LLANDDWYN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology including coastal geomorphology of Wales)	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology / habitat and geology (GCR) including coastal geomorphology of Wales)		NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
16.8	SSSI	NEWBOROUGH WARREN - YNYS LLANDDWYN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology including coastal geomorphology of Wales)	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology / habitat and geology (GCR) including coastal geomorphology of Wales)		NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
16.9	SSSI	MALLTRAETH MARSH/CORS DDYGA	Biodiversity, Flora and Fauna	National - Botanical, ornithological and ecological	National	HTL - This policy is for protection of assets and will not alter the hydrology of the water course out from the marsh. Therefore a neutral impact.	HTL - This policy is for protection of assets and will not alter the hydrology of the water course out from the marsh. Therefore a neutral impact.	HTL - This policy is for protection of assets and will not alter the hydrology of the water course out from the marsh. Therefore a neutral impact.	

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16.9	SSSI	NEWBOROUGH WARREN - YNYS LLANDDWYN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology including coastal geomorphology of Wales)	National	HTL - The policy in the inner estuary (16.9; embankment and village) where defences are already in place could result in the reduction in intertidal mudflat habitat due to the constraint imposed on the defences, with areas of mudflat being colonised by saltmarsh, whereas lower areas of estuarine mud would become subtidal. The area affected in this epoch would be relatively small. Therefore a minor negative impact.	HTL - The policy in the inner estuary (16.9; embankment and village) where defences are already in place could result in the reduction in intertidal mudflat habitat due to the constraint imposed on the defences, with areas of mudflat being colonised by saltmarsh, whereas lower areas of estuarine mud would become subtidal. Overall, 3.3ha of mudflat could be lost in this epoch. Therefore a major negative impact.	HTL - The policy in the inner estuary (16.9; embankment and village) where defences are already in place could result in the reduction in intertidal mudflat habitat due to the constraint imposed on the defences, with areas of mudflat being colonised by saltmarsh, whereas lower areas of estuarine mud would become subtidal. Overall, 3.65ha of mudflat could be lost in this epoch. Therefore a major negative impact.	Habitat creation.
16.10	SSSI	NEWBOROUGH WARREN - YNYS LLANDDWYN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology including coastal geomorphology of Wales)	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Any effects would be as a result of natural processes. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Any effects would be as a result of natural processes. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Any effects would be as a result of natural processes. Therefore a neutral impact.	
16.10	SSSI	PENRHYNOEDD LLANGADWALADR	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
16.11	SSSI	AFON GWYRFAI A LLYN CWELLYN	Biodiversity, Flora and Fauna	National nature conservation and geological interest	National	HTL - Saline intrusion of the lower reaches of the river is possible as a result of sea level rise and in response to the coastal squeeze, and not as a result of the SMP intentions or policies. It is considered that there will be no significant impact on the features of this SSSI as a result of the preferred management options. Therefore a neutral impact.	HTL - Saline intrusion of the lower reaches of the river is possible as a result of sea level rise and in response to the coastal squeeze, and not as a result of the SMP intentions or policies. It is considered that there will be no significant impact on the features of this SSSI as a result of the preferred management options. Therefore a neutral impact.	MR - Saline intrusion of the lower reaches of the river is possible as a result of sea level rise and in response to the coastal squeeze, and not as a result of the SMP intentions or policies. It is considered that there will be no significant impact on the features of this SSSI as a result of the preferred management options. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.11	SSSI	Y FORYD	Biodiversity, Flora and Fauna	National nature conservation interest (ornithological and marine biological features)	National	HTL - The policy would result in the loss of intertidal habitat as the sandflats/mudflats are constrained as sea level rises. Therefore a major negative impact.	HTL - The policy would result in the loss of intertidal habitat as the sandflats/mudflats are constrained as sea level rises. Therefore a major negative impact.	MR - This policy is likely to allow the foreshore to progress more naturally. Therefore a neutral impact.	Potentially move defences landward were feasible at a local level to allow intertidal habitat to roll back in line with sea level rise, reducing the extent of site feature affected.
16.15	SSSI	COEDYDD AFON MENAI	Biodiversity, Flora and Fauna		National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
16.18	SSSI	GLANNAU PORTHAETHWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat including reefs)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
16.19	SSSI	GLANNAU PORTHAETHWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat including reefs)	National	HTL - The policy may result in the slowing of erosion and the natural succession of the rocky shore feature and associated communities. With SLR the lower shore muddy gravel communities may become sub tidal resulting in a loss of extent. Therefore a moderate negative impact.	HTL - The policy may result in the slowing of erosion and the natural succession of the rocky shore feature and associated communities. With SLR the lower shore muddy gravel communities may become sub tidal resulting in a loss of extent. Therefore a moderate negative impact.	HTL - The policy may result in the slowing of erosion and the natural succession of the rocky shore feature and associated communities. With SLR the lower shore muddy gravel communities may become sub tidal resulting in a loss of extent. Therefore a moderate negative impact.	Habitat creation.
16.20	SSSI	GLANNAU PORTHAETHWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat including reefs)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	

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16.20	SSSI	CADNANT DINGLE	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat including semi-natural woodland)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
16.22	SSSI	GLANNAU PENMON - BIWMARES	Biodiversity, Flora and Fauna		National	HTL - The policy may result in the slowing of erosion and the natural succession of the rocky shore feature and associated communities. With SLR the lower shore muddy gravel communities may become sub tidal resulting in a loss of extent. However, only approximately 40m of the designation overlaps with the northern extent of this PU and the effects of SLR in epoch 1 would be minimal. Therefore a minor negative impact.	HTL - The policy may result in the slowing of erosion and the natural succession of the rocky shore feature and associated communities as they become squeezed by the defences and the lido. With SLR the lower shore muddy gravel communities may become sub tidal resulting in a loss of extent. Therefore a moderate negative impact.	MR - The overall intent would be to adapt the defences with the intent of using the width of the green to landscape flood defence. This would allow some natural rollback of the coastline. Therefore a minor negative impact.	Move the policy line down to the boundary of the SSSI and remove lido.
16.23	SSSI	GLANNAU PENMON - BIWMARES	Biodiversity, Flora and Fauna		National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
16.24	SSSI	GLANNAU PENMON - BIWMARES	Biodiversity, Flora and Fauna		National	HTL - The policy would constrain intertidal habitat and result in the potential loss of lower shore muddy gravel communities. The strip if intertidal fronting the road is relatively narrow. Therefore a moderate negative impact.	HTL - The policy would constrain intertidal habitat and result in the potential loss of lower shore muddy gravel communities. The strip if intertidal fronting the road is relatively narrow. Therefore a moderate negative impact.	HTL - The policy would constrain intertidal habitat and result in the potential loss of lower shore muddy gravel communities. The strip if intertidal fronting the road is relatively narrow. Therefore a moderate negative impact.	Re-creation of habitat or beach nourishment.
16.24	SSSI	BARON HILL PARK	Biodiversity, Flora and Fauna	National nature conservation interest - Botanical,	National	HTL - Prevention of loss of SSSI site area though not thought to contain significant key features for the site. Therefore a minor positive impact.	HTL - Prevention of loss of SSSI site area though not thought to contain significant key features for the site. Therefore a minor positive impact.	HTL - Prevention of loss of SSSI site area though not thought to contain significant key features for the site. Therefore a minor positive impact.	

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16.25	SSSI	ARFORDIR GOGLEDDOL PENMON	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical, ornithological and marine biological features	National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
16.25	SSSI	GLANNAU PENMON - BIWMARES	Biodiversity, Flora and Fauna	National nature conservation interest (ecology/habitat/geology (GCR))	International and National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology/habitat/geology (GCR))		NAI - In this PU the SSSI is also designated as a GCR site called Lleiniog. The SSSI also overlaps with the Flagstaff Quarry GCR. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site called Lleiniog. The SSSI also overlaps with the Flagstaff Quarry GCR. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site called Lleiniog. The SSSI also overlaps with the Flagstaff Quarry GCR. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
16.26	SSSI	COEDYDD AFON MENAI	Biodiversity, Flora and Fauna		National	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	
16.29	SSSI	TRAETH LAFAN	Biodiversity, Flora and Fauna	National nature conservation interest (ornithology / ecology / habitat including mudflats, sandflats)	National	HTL - The policy would result in the loss of intertidal habitat as the sandflats/mudflats are constrained as sea level rises. Therefore a major negative impact.	HTL - The policy would result in the loss of intertidal habitat as the sandflats/mudflats are constrained as sea level rises. Therefore a major negative impact.	HTL - The policy would result in the loss of intertidal habitat as the sandflats/mudflats are constrained as sea level rises. Therefore a major negative impact.	Re-creation of habitat or beach nourishment.

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16.30	SSSI	TRAETH LAFAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat including mudflats, sandflats)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
16.31	SSSI	TRAETH LAFAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat including mudflats, sandflats)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
16.33	SSSI	TRAETH LAFAN	Biodiversity, Flora and Fauna	National nature conservation interest (ornithology / ecology / habitat including mudflats, sandflats)	National	HTL - The policy would result in the loss of intertidal habitat as the sandflats/mudflats are constrained as sea level rises. This would indirectly affect the ornithological features as a result of loss of feeding habitat. Therefore a major negative impact.	HTL - The policy would result in the loss of intertidal habitat as the sandflats/mudflats are constrained as sea level rises. This would indirectly affect the ornithological features as a result of loss of feeding habitat. Therefore a major negative impact.	MR - The policy aim would be to adjust to a more favourable alignment in the long term. Under this policy the assumption would be that the loss within epoch 3 would be alleviated. Therefore a neutral impact.	Re-creation of habitat or beach nourishment.
17.1	SSSI	PENRHYNODD LLANGADWALADR	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
17.2	SSSI	PENRHYNODD LLANGADWALADR	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	

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17.2	SSSI	TYWYN ABERFFRAW	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geomorphology including dunes, lakes and estuary)	International and National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology / habitat and geomorphology (GCR) including dunes, lakes and estuary)		NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
17.2	SSSI	PENRHYNOEDD LLANGADWALADR	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
17.4	SSSI	TY CROES	Biodiversity, Flora and Fauna	National nature conservation interest (ecology and habitat)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
17.4	SSSI	TYWYN ABERFFRAW	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geomorphology including dunes, lakes and estuary)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
17.5	SSSI	LLYN MAELOG	Biodiversity, Flora and Fauna		National	MR - This policy would not impact on the designated features of the SSSI. Therefore a neutral impact.	MR - This policy would not impact on the designated features of the SSSI. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.6	SSSI	RHOSNEIGR REEFS	Biodiversity, Flora and Fauna	National nature conservation interest (ecology and habitat)	National	HTL - The policy would not result in the reduction of the reef feature. Therefore a neutral impact.	HTL - The policy would not result in the reduction of the reef feature. Therefore a neutral impact.	MR - The policy would not result in the reduction of the reef feature. Therefore a neutral impact.	
17.6	SSSI	RHOSNEIGR	Earth Heritage, Soils and Geology	Geological (GCR)	International and National	HTL - This policy would not affect the rock exposures which are also designated a GCR site. Therefore a neutral impact.	HTL - This policy would not affect the rock exposures which are also designated a GCR site. Therefore a neutral impact.	MR - This policy would not affect the rock exposures which are also designated a GCR site. Therefore a neutral impact.	
17.7	SSSI	RHOSNEIGR	Biodiversity, Flora and Fauna	Geological (GCR)	International and National	HTL - This policy would not affect the rock exposures which are also designated a GCR site. Therefore a neutral impact.	HTL - This policy would not affect the rock exposures which are also designated a GCR site. Therefore a neutral impact.	HTL - This policy would not affect the rock exposures which are also designated a GCR site. Therefore a neutral impact.	
17.8	SSSI	YNYS FEURIG	Biodiversity, Flora and Fauna	National nature conservation interest (ecological and ornithological)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
17.9	SSSI	GLANNAU RHOSCOLYN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology)	International and National	MR - The policy focuses on the management of the bays and would not affect the features of the SSSI. Therefore a neutral impact.	MR - The policy focuses on the management of the bays and would not affect the features of the SSSI. Therefore a neutral impact.	MR - The policy focuses on the management of the bays and would not affect the features of the SSSI. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology / habitat and geology (GCR))		MR - In this PU the SSSI is also designated as a GCR site. The general policy for allowing natural development of the coast applies to this frontage recognising specific issues at Aberffraw and Rhosneigr. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	MR - In this PU the SSSI is also designated as a GCR site. The general policy for allowing natural development of the coast applies to this frontage recognising specific issues at Aberffraw and Rhosneigr. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	MR - In this PU the SSSI is also designated as a GCR site. The general policy for allowing natural development of the coast applies to this frontage recognising specific issues at Aberffraw and Rhosneigr. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.9	SSSI	GLANNAU YNYS GYBI: HOLY ISLAND COAST	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology)	National	MR - The policy focuses on the management of the bays and would not affect the features of the SSSI. Therefore a neutral impact.	MR - The policy focuses on the management of the bays and would not affect the features of the SSSI. Therefore a neutral impact.	MR - The policy focuses on the management of the bays and would not affect the features of the SSSI. Therefore a neutral impact.	
17.10	SSSI	GLANNAU RHOSCOLYN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology)	International and National	MR - The area behind the defences is not thought to contain significant key features for the site. Therefore a neutral impact.	MR - The area behind the defences is not thought to contain significant key features for the site. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology / habitat and geology (GCR))		MR - In this PU the SSSI is also designated as a GCR site. This policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	MR - In this PU the SSSI is also designated as a GCR site. This policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. This policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
17.10	SSSI	RHOSCOLYN REEDBED	Biodiversity, Flora and Fauna	National - Botanical	National	MR - Under this policy the SSSI features are not anticipated to be affected. Therefore a neutral impact.	MR - Under this policy the SSSI features are not anticipated to be affected. Therefore a neutral impact.	NA - Under this policy the SSSI features are not anticipated to be affected as the dune would roll back protecting the features. Therefore a neutral impact.	
17.14	SSSI	GLANNAU YNYS GYBI: HOLY ISLAND COAST	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat and geology)	International and National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (ecology / habitat and geology)		NAI - In this PU at South Stack the SSSI is also designated as a GCR site called <i>South Stack</i> . This policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU at South Stack the SSSI is also designated as a GCR site called <i>South Stack</i> . This policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU at South Stack the SSSI is also designated as a GCR site called <i>South Stack</i> . This policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.17	SSSI	BEDDMANARCH-CYMYRAN	Biodiversity, Flora and Fauna	National nature conservation interest. Variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest	National	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	NAI - Being the preferred policy, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Thus neutral impact.	
17.18	SSSI	BEDDMANARCH-CYMYRAN	Biodiversity, Flora and Fauna	National nature conservation interest. Variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest	National	HTL - The policy relates to Stanley Embankment and would not significantly affect the SSSI features. Therefore a neutral impact.	HTL - The policy relates to Stanley Embankment and would not significantly affect the SSSI features. Therefore a neutral impact.	HTL - The policy relates to Stanley Embankment and would not significantly affect the SSSI features. Therefore a neutral impact.	
17.19	SSSI	BEDDMANARCH-CYMYRAN	Biodiversity, Flora and Fauna	National nature conservation interest. Variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest	National	MR - The policy involved local defence to sustain Four Mile Bridge and local defence against flood within hinterland. These policies are not anticipated to significantly interact with interest features. Therefore a neutral impact.	MR - The policy involved local defence to sustain Four Mile Bridge and local defence against flood within hinterland. These policies are not anticipated to significantly interact with interest features. Therefore a neutral impact.	MR - The policy involved local defence to sustain Four Mile Bridge and local defence against flood within hinterland. These policies are not anticipated to significantly interact with interest features. Therefore a neutral impact.	
17.20		BEDDMANARCH-CYMYRAN	Biodiversity, Flora and Fauna	National nature conservation interest. Variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest	National	HTL - The policy would result in the loss of intertidal habitat in front of the defences. Therefore a major negative impact.	HTL - The policy would result in the loss of intertidal habitat in front of the defences. Therefore a major negative impact.	HTL - The policy would result in the loss of intertidal habitat in front of the defences. Therefore a major negative impact.	Habitat creation.
17.21	SSSI	BEDDMANARCH-CYMYRAN	Biodiversity, Flora and Fauna	National nature conservation interest. Variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest	National	MR - The policy involved a coordinated approach to slowing erosion. This is unlikely to result in a significant loss of habitat. Therefore a neutral impact.	MR - The policy involved a coordinated approach to slowing erosion. This is unlikely to result in a significant loss of habitat. Therefore a neutral impact.	MR - The policy involved a coordinated approach to slowing erosion. This is unlikely to result in a significant loss of habitat. Therefore a neutral impact.	
17.22	SSSI	BEDDMANARCH-CYMYRAN	Biodiversity, Flora and Fauna	National nature conservation interest. Variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest	National	MR - Under this policy the shoreline would be allowed to roll back, maintaining a narrow foreshore ridge for flood protection. This is unlikely to affect the interest features. Therefore a neutral impact.	MR - Under this policy the shoreline would be allowed to roll back, maintaining a narrow foreshore ridge for flood protection. This is unlikely to affect the interest features. Therefore a neutral impact.	MR - Under this policy the shoreline would be allowed to roll back, maintaining a narrow foreshore ridge for flood protection. This is unlikely to affect the interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.23	SSSI	BEDDMANARCH-CYMYRAN	Biodiversity, Flora and Fauna	National nature conservation interest. Variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest	National	MR - Under this policy the shoreline would be allowed to roll back, maintaining a narrow foreshore ridge for flood protection. This is unlikely to affect the interest features. Therefore a neutral impact.	MR - Under this policy the shoreline would be allowed to roll back, maintaining a narrow foreshore ridge for flood protection. This is unlikely to affect the interest features. Therefore a neutral impact.	MR - Under this policy the shoreline would be allowed to roll back, maintaining a narrow foreshore ridge for flood protection. This is unlikely to affect the interest features. Therefore a neutral impact.	
18.1	SSSI	CEMLYN BAY	Biodiversity, Flora and Fauna	National nature conservation interest - Tidal rivers, estuaries, mudflats, sandflats, lagoons (including saltwork basins)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
18.1	SSSI	CARMEL HEAD	Biodiversity, Flora and Fauna	Geological (GCR)	International and National	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	
18.1	SSSI	CLEGIR MAWR	Biodiversity, Flora and Fauna	National nature conservation interest (botanical)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
18.6	SSSI	CEMLYN BAY	Biodiversity, Flora and Fauna	National nature conservation interest - Tidal rivers, estuaries, mudflats, sandflats, lagoons (including saltwork basins)	National	MR - The intent here is to manage and maintain the weir structure and not the natural ridge structure with the aim of maintaining the functioning of the lagoon and allow the natural transition into NAI in the following epoch. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Any effects would be as a result of natural processes. Therefore a neutral impact.	NAI - Being the preferred policy for the majority of this unit, therefore no direct or indirect effects as a result of coastal management policy is expected. Any effects would be as a result of natural processes. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
18.6	SSSI	HENBORTH	Earth Heritage, Soils and Geology	Geological (GCR)	International and National	MR - In this PU the SSSI is also designated as a GCR site. The policy relates to works at Cemlyn Bay to the east. The interest features would not be affected by this policy. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. SMP policy will ensure nature conservation interests of the SSSI and GCR are maintained through promoting natural processes. Therefore neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site. SMP policy will ensure nature conservation interests of the SSSI and GCR are maintained through promoting natural processes. Therefore neutral impact.	
18.12	SSSI	LLANBADRIG - DINAS GYNFOR	Biodiversity, Flora and Fauna	National nature conservation interest (geology)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
18.13	SSSI	LLANBADRIG - DINAS GYNFOR	Biodiversity, Flora and Fauna	National nature conservation interest (geology)	National	NAI - In this PU the SSSI also has GCR designated associated with it including; <i>Llanbadrig Area, Ogof Gynfor and Ogof Gynfor - Hell's Mouth</i> . Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - In this PU the SSSI also has GCR designated associated with it including; <i>Llanbadrig Area, Ogof Gynfor and Ogof Gynfor - Hell's Mouth</i> . Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - In this PU the SSSI also has GCR designated associated with it including; <i>Llanbadrig Area, Ogof Gynfor and Ogof Gynfor - Hell's Mouth</i> . Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
19.1	SSSI	TRAETH LLIGWY	Earth Heritage, Soils and Geology	National nature conservation interest (geology (GCR))	International and National	NAI - In this PU the SSSI also has GCR designated associated with it including; <i>Traeth Lligwy and Porth-y-Mor</i> . Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - In this PU the SSSI also has GCR designated associated with it including; <i>Traeth Lligwy and Porth-y-Mor</i> . Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - In this PU the SSSI also has GCR designated associated with it including; <i>Traeth Lligwy and Porth-y-Mor</i> . Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
19.3	SSSI	COED Y GELL AND MORFA DULAS	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat - woodland, dune grassland and saltmarsh)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
19.11		TRWYN DWLBAN	Earth Heritage, Soils and Geology		International and National	NAI - In this PU the SSSI also has GCR designated associated with it including; Trwyn Dwlban and Red Wharf Bay (Traeth Coch). Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - In this PU the SSSI also has GCR designated associated with it including; Trwyn Dwlban and Red Wharf Bay (Traeth Coch). Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - In this PU the SSSI also has GCR designated associated with it including; Trwyn Dwlban and Red Wharf Bay (Traeth Coch). Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI or GCR interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
19.11	SSSI	TRWYN DWLBAN	Biodiversity, Flora and Fauna		National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
19.16	SSSI	ARFORDIR GOGLEDDOL PENMON	Biodiversity, Flora and Fauna	National nature conservation interest - Geological, botanical and marine biological features	International and National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest - Geological , botanical and marine biological features		NAI - In this PU the SSSI is also designated as a GCR site called <i>Tandinas Quarry</i> . The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site called <i>Tandinas Quarry</i> . The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	NAI - In this PU the SSSI is also designated as a GCR site called <i>Tandinas Quarry</i> . The preferred policy would allow for the continuation of natural processes which support geological exposure of interest features. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
19.17		PUFFIN ISLAND	Biodiversity, Flora and Fauna	National nature conservation interest - Ornithological	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
20.1	SSSI	TRAETH LAFAN	Biodiversity, Flora and Fauna	National nature conservation interest (ecology / habitat including mudflats, sandflats, ornithology)	National	HTL - This policy is not expected to result in the significant loss of intertidal in epoch 1. Therefore a minor negative impact.	HTL - This policy would result in a loss of intertidal sandflat as the sandflats are constrained. Although no intertidal sandflat is expected to be lost in epoch 1, up to 0.03ha could be lost in epoch 2. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent and potentially also impact on the ornithological features of the site due to loss of feeding habitat. Therefore a major negative impact.	HTL - This policy would result in a loss of intertidal sandflat as the sandflats are constrained. Although no intertidal sandflat is expected to be lost in epoch 1, up to 0.01ha could be lost in this epoch 3. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent and potentially also impact on the ornithological features of the site due to loss of feeding habitat. Therefore a major negative impact.	None identified
20.3	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	MR - The intent would be to manage the frontage and to sustain the dune as a semi-natural feature, in providing important defence to the area behind. This requires increasing the width of the functioning dune system in the future. This could in part be by reducing the impact of Golf Course management behind, but is as likely to require more determined management of the processes on the shoreline. The policy for the frontage, recognising the broader intent would be to Hold the Line during epochs 1 and 2, but to change to an approach of Managed Realignment in epoch 3. This is likely to involve realignment forwards, rather than retreat. This would potentially result in the loss of intertidal sand and mudflat habitat. Therefore a moderate negative impact.	Re-creation of habitat.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.4	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of a small proportion of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Because of the limited extent of intertidal habitat present in this PU the affect is assessed as a moderate negative impact.	HTL - Policy would cause reduction of a small proportion of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Because of the limited extent of intertidal habitat present in this PU the affect is assessed as a moderate negative impact.	HTL - Policy would cause reduction of a small proportion of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Because of the limited extent of intertidal habitat present in this PU the affect is assessed as a moderate negative impact.	
20.5	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	Re-creation of habitat.
20.6	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	MR - This policy would allow some coastal recession and continuation of natural processes. Therefore a minor positive impact.	
20.7	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.8	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	MR - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	Habitat creation.
20.9	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Although the foreshore is relatively narrow at this point, the policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL / MR - Although the foreshore is relatively narrow at this point, the policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	MR - The defences would have to be strengthened over the third epoch as erosion continues to the spit. The policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	Habitat creation.
20.10	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	Habitat creation.
20.11	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	MR - This policy would allow the coast to roll back naturally creating additional intertidal habitat. Therefore a major positive impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.11	SSSI	PEN Y GOGARTH / GREAT ORMES HEAD	Biodiversity, Flora and Fauna	National nature conservation interest (geology (GCR), ecology including marine and terrestrial invertebrate biology and ornithology)	International and National	HTL - North of the northern breakwater, the policy would be for No Active Intervention (This would not preclude the possibility of local private management subject to normal approvals). Therefore a neutral impact.	HTL - North of the northern breakwater, the policy would be for No Active Intervention (This would not preclude the possibility of local private management subject to normal approvals). Therefore a neutral impact.	MR - North of the northern breakwater, the policy would be for No Active Intervention (This would not preclude the possibility of local private management subject to normal approvals). Therefore a neutral impact.	
			Earth Heritage, Soils and Geology	National nature conservation interest (geology (GCR)), ecology including marine and terrestrial invertebrate biology and ornithology)		HTL - In this PU the SSSI is also designated as a GCR site. North of the northern breakwater, the policy would be for No Active Intervention (This would not preclude the possibility of local private management subject to normal approvals). Therefore a neutral impact.	HTL - In this PU the SSSI is also designated as a GCR site. North of the northern breakwater, the policy would be for No Active Intervention (This would not preclude the possibility of local private management subject to normal approvals). Therefore a neutral impact.	MR - In this PU the SSSI is also designated as a GCR site. North of the northern breakwater, the policy would be for No Active Intervention (This would not preclude the possibility of local private management subject to normal approvals). Therefore a neutral impact.	
20.12	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
20.13	SSSI	PEN Y GOGARTH / GREAT ORMES HEAD	Biodiversity, Flora and Fauna / Earth Heritage, Soils and Geology	National nature conservation interest (geology (GCR), ecology including marine and terrestrial invertebrate biology and ornithology)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. In this PU the SSSI is also designated as a GCR site. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. In this PU the SSSI is also designated as a GCR site. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. In this PU the SSSI is also designated as a GCR site. Therefore a neutral impact.	
20.14	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.14	SSSI	BENARTH WOOD	Biodiversity, Flora and Fauna		National	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
20.15	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	MR - This policy would not impact on the designated features of the SSSI and would potentially result in increased intertidal habitat as the defences are re-aligned through the Nature Reserve. The main breeding populations of the belted beauty moth occur at Morfa Conwy and would not be affected by the policy. Therefore a minor positive impact.	
20.16	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	Habitat creation.
20.17	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Corresponding SEA Feature	Benefits/Why is issue important	Scale	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.18	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - At Tal-y-Cafn, the policy would be to maintain existing defence to low lying land initially over epoch 1. This would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	MR - From epoch 2 onwards the policy would be for managed realignment. This would need to be considered in detail, to establish road levels. The realignment would take the railway line as the limit of defence. This policy is likely to allow the foreshore to progress naturally. Therefore a neutral impact.	MR - From epoch 2 onwards the policy would be for managed realignment. This would need to be considered in detail, to establish road levels. The realignment would take the railway line as the limit of defence. This policy is likely to allow the foreshore to progress naturally. Therefore a neutral impact.	Habitat creation.
20.19	SSSI	ABER AFON CONWY	Biodiversity, Flora and Fauna	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	HTL - Policy would cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. This would affect the achievement of favourable condition in relation to the intertidal sandflat extent. Therefore a major negative impact.	MR - Under this policy the intent would be to relocate the railway line to the edge of the tidal flood plain. This policy is likely to allow the foreshore to progress naturally. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the SSSI interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation.

**ANNEX D - DETAILED ASSESSMENT TABLES FOR BIODIVERSITY ACTION
PLAN HABITATS**

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.2	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
2.2	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - Under this policy the extent of intertidal habitat would not be affected and the development of constrained intertidal habitat would still occur. Therefore a neutral impact.	
2.4	BAP habitat	Littoral_Rock_region	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat respond to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat respond to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
2.5	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation.
2.5	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
2.5	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - Under this policy the extent of intertidal habitat would not be affected and the development of constrained intertidal habitat would still occur. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.6	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
2.8	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
2.8	BAP habitat	Dwarf_Shrub_Heath_region	HTL - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
2.10	BAP habitat	Bracken_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
2.10	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
2.10	BAP habitat	Dwarf_Shrub_Heath_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
2.10	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
2.11	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
2.11	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
2.11	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
2.12	BAP habitat	Bracken_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
3.3	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
3.3	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.3	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact .	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact .	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact .	
3.4	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
3.4	BAP habitat	Dwarf_Shrub_Heath_region	HTL - This policy is not anticipated to significantly affect this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
3.4	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
3.4	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact .	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
3.5	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.8	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
3.8	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
3.8	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
3.8	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	
3.9	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
3.9	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
3.9	BAP habitat	Littoral_Sediment_region	MR - This policy could potentially create additional intertidal habitat over the long term with the realignment. Thus major positive impact.	MR - This policy could potentially create additional intertidal habitat over the long term with the realignment. Thus major positive impact.	MR - This policy could potentially create additional intertidal habitat over the long term with the realignment. Thus major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.10	BAP habitat	Bracken_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
3.10	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
3.10	BAP habitat	Dwarf_Shrub_Heath_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
3.10	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
3.10	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
3.10	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
3.10	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
3.11	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
4.2	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL/AL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
4.2	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - Policy has the potential to cause reduction (0.8ha) of intertidal habitat as the sandflats respond to SLR. Therefore a major negative impact.	HTL/AL - Policy has the potential to cause reduction (2ha) of intertidal habitat as the sandflats respond to SLR. Therefore a major negative impact.	Habitat creation.
4.3	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
4.3	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
4.3	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	
4.5	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.5	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	
4.6	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
4.6	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	
4.7	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
4.7	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	
4.10	BAP habitat	Bracken_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.10	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
4.10	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
4.10	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
4.12	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
4.12	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
4.12	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of intertidal habitat as the sandflat responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.14	BAP habitat	Bracken_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
4.14	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
4.14	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
4.14	BAP habitat	Littoral_Sediment_region	MR - This policy is not anticipated to result in a significant loss of habitat extent. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of habitat extent. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of habitat extent. Therefore a neutral impact.	
4.15	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
4.15	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
4.15	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat, mudflat or saltmarsh habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of saltmarsh (0.2ha), mudflat (0.2ha) and sandflat (0.3ha) of intertidal habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - The default policy in this epoch is NAI, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
4.18	BAP habitat	Bracken_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
4.18	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
5.3	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
5.3	BAP habitat	Fen_Marsh_Swamp_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
5.3	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
5.3	BAP habitat	Littoral_Sediment_region	MR - The default policy in this epoch is NAI, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	MR - The default policy in this epoch is NAI, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	MR - The default policy in this epoch is NAI, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
5.5	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.5	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.4ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	
5.7	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
5.7	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
5.7	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	
5.7	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
5.7	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.6ha) and mudflat (0.2ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR - This aim of this policy is an adaptive approach that supports fringe habitat development. Therefore a minor positive impact.	Habitat creation.
5.8	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
5.8	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
5.11	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
6.2	BAP habitat	Bracken_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
6.2	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
5.8	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.1 ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.5ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (1.4ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a major negative impact.	Habitat creation.
6.2	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.4ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	
6.4	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
6.6	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
6.8	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
6.8	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
6.8	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
6.8	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
7.2	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
7.2	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat or mudflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.2ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.5ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a major negative impact.	Habitat creation.
7.3	BAP habitat	Bracken_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
7.3	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
7.3	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
7.4	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
7.4	BAP habitat	Littoral_Sediment_region	MR - Under this policy the intent would be for managed realignment as existing defences fail. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	MR - Under this policy the intent would be for managed realignment as existing defences fail. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	MR - Under this policy the intent would be for managed realignment as existing defences fail. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	
7.5	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
7.5	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
7.5	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
8.1	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
8.1	BAP habitat	Coastal_and_floodplain grazing marsh	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
8.2	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
8.2	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
8.2	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	MR - This policy considers realignment southern end of the defence in the future. Long term management of this area would be linked to long term management of Aberaeron North. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	
8.3	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	
8.4	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
8.4	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.4ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (1.1ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
8.6	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
8.8	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
8.8	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
8.9	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
9.2	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. Therefore a major negative impact.	MR - Policy has the potential to cause reduction of intertidal habitat as the sandflat and mudflats respond to SLR. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
9.2	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
9.2	BAP habitat	Littoral_Sediment_region	MR - The long term intent would be to allow a breach through to the Ystwyth but to manage this initially in discussion with landowners with respect to long term management of the new inlet. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	MR - The long term intent would be to allow a breach through to the Ystwyth but to manage this initially in discussion with landowners with respect to long term management of the new inlet. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
9.3	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
9.3	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat, mudflat or saltmarsh habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. There are not anticipated to be any impacts to mudflat and saltmarsh. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.2ha) habitat as the intertidal responds to SLR. There are not anticipated to be any impacts to mudflat and saltmarsh. The area at risk is considered insignificant therefore a minor negative impact.	
9.7	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat or saltmarsh habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.2ha) habitat as the intertidal responds to SLR. There are not anticipated to be any impacts to saltmarsh. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.5ha) habitat as the intertidal responds to SLR. There are not anticipated to be any impacts to saltmarsh. The area at risk is considered insignificant therefore a minor negative impact.	
9.8	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	
9.9	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.2ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.6ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
9.11	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
9.11	BAP habitat	Littoral_Sediment_region	MR - The preferred policy of MR at Clarach Bay in this PU will involve retreating the central part of the bay over the 3 epochs. MR of the current breakwater would allow for the beach area to widen and would increase the extent of intertidal habitat in the short to medium term. Therefore a major positive impact.	MR - The preferred policy of MR at Clarach Bay in this PU will involve retreating the central part of the bay over the 3 epochs. MR of the current breakwater would allow for the beach area to widen and would increase the extent of intertidal habitat in the short to medium term. Therefore a major positive impact.	MR - The preferred policy of MR at Clarach Bay in this PU will involve retreating the central part of the bay over the 3 epochs. MR of the current breakwater would allow for the beach area to widen and would increase the extent of intertidal habitat in the short to medium term. Therefore a major positive impact.	
10.1	BAP habitat	Dwarf_Shrub_Heath_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
10.1	BAP habitat	Fen_Marsh_Swamp_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
10.1	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.1	BAP habitat	Littoral_Sediment_region	MR - Under this policy a suitable buffer zone would be established to allow future cliff recession. Natural processes would be allowed to continue. Therefore a neutral impact.	MR - Under this policy a suitable buffer zone would be established to allow future cliff recession. Natural processes would be allowed to continue. Therefore a neutral impact.	MR - Under this policy a suitable buffer zone would be established to allow future cliff recession. Natural processes would be allowed to continue. Therefore a neutral impact.	
10.2	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.2	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.4ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (1.8ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR - Although the exact details for this policy are not known at this stage it is considered that on balance it is not likely to result in a net loss of habitat. Therefore a neutral impact.	Habitat creation.
10.4	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
10.4	BAP habitat	Littoral_Sediment_region	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
10.5	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.5	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.5	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	MR - Under this policy the intent would be for managed realignment as existing defences are allowed to fail. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	
10.6	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.6	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.6	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.6	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
10.6	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (1.9ha), mudflat (3.6ha) and saltmarsh (14.5ha) as the intertidal habitat responds to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (9.5ha), mudflat (17.8ha) and saltmarsh (54.4ha) as the intertidal habitat responds to SLR. Therefore a major negative impact.	MR - Under this policy the intent would be for managed realignment as existing defences are allowed to fail. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	Habitat creation.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.7	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.7	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.7	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in the loss of mudflat habitats but there is the potential risk of a reduction of saltmarsh (1.1ha). Therefore a major negative impact.	HTL - Policy is not anticipated to result in the loss of mudflat habitats but there is the potential risk of a reduction of saltmarsh (4.5ha). Therefore a major negative impact.	MR - This policy could potentially create additional intertidal habitat over the long term with the realignment of transport routes and reduce the scale of the potential impact. Thus major positive impact.	Habitat creation.
10.10	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.10	BAP habitat	Littoral_Sediment_region	MR - Policy would be for managed realignment but with the intent to maintain defence to the village and the road. Significant potential to create additional habitat exists. Therefore a major positive impact.	MR - Policy would be for managed realignment but with the intent to maintain defence to the village and the road. Significant potential to create additional habitat exists. Therefore a major positive impact.	MR - Policy would be for managed realignment but with the intent to maintain defence to the village and the road. Significant potential to create additional habitat exists. Therefore a major positive impact.	
10.11	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.11	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location but there is a potential risk of a reduction of saltmarsh (1ha) habitat. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of intertidal habitat as the sandflat (0.4ha) and mudflats (0.1ha) and also saltmarsh (3.9ha) as habitats respond to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of intertidal habitat as the sandflat (1ha) and mudflats (0.3ha) and also saltmarsh (10.3ha) as habitats respond to SLR. Therefore a major negative impact.	Habitat creation.
10.12	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
10.12	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
10.12	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (1.4ha) and mudflat (0.8ha) ad habitats respond to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (6.8ha) and mudflat (4.2ha) ad habitats respond to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (17.6ha) and mudflat (10.8ha) ad habitats respond to SLR. Therefore a major negative impact.	Habitat creation.
10.13	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
10.13	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.5 ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - Policy has the potential to cause reduction of sandflat (1.2ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.14	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.14	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.14	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
10.15	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
10.16	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
10.16	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
10.16	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.3ha) and mudflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - Policy has the potential to cause reduction of sandflat (1.4ha) and mudflat (0.4ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (3.5ha) and mudflat (1ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
10.18	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.18	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
10.18	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	MR - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	
10.19	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
10.19	BAP habitat	Littoral_Sediment_region	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
11.1	BAP habitat	Bracken_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
11.1	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.2	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.2	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.3	BAP habitat	Dwarf_Shrub_Heath_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
11.3	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
11.4	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
11.5	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
11.5	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.5	BAP habitat	Littoral_Sediment_region	MR - Under this policy the intent would be for managed realignment and roll back of the coast. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	MR - Under this policy the intent would be for managed realignment and roll back of the coast. This has the potential to maintain or create some intertidal habitat. Therefore a moderate positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
11.6	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy may impact a very small area of habitat. Therefore a minor negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
11.6	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
11.6	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (0.2ha), mudflat (0.4ha) and saltmarsh (1.7ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR - Under this policy no net loss of habitat has been identified. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation.
11.9	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.9	BAP habitat	Dwarf_Shrub_Heath_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.9	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.9	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
11.9	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
11.9	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (0.34ha) and saltmarsh (0.2ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR This policy will allow for the saltmarsh and intertidal habitat to move landward in the long term. Therefore a major positive impact.	MR This policy will allow for the saltmarsh and intertidal habitat to move landward in the long term. Therefore a major positive impact.	Habitat creation.
11.10	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.10	BAP habitat	Coniferous_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation.
11.10	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation.
11.10	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.10	BAP habitat	Littoral_Sediment_region	MR - Overall the MR policies within this PU would be expected to significantly increase the area of both estuary and intertidal habitats. Therefore a major positive impact.	MR - Overall the MR policies within this PU would be expected to significantly increase the area of both estuary and intertidal habitats. Therefore a major positive impact.	MR - Overall the MR policies within this PU would be expected to significantly increase the area of both estuary and intertidal habitats. Therefore a major positive impact.	
11.11	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
11.12	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.12	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location but there is a potential risk of a reduction of saltmarsh (1.9ha) habitat. Therefore a major negative impact.	MR - This policy could potentially create additional intertidal habitat over the long term and reduce the scale of the potential impact. Thus major positive impact.	MR - This policy could potentially create additional intertidal habitat over the long term and reduce the scale of the potential impact. Thus major positive impact.	Habitat creation.
11.13	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.13	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.13	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.13	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
11.13	BAP habitat	Littoral_Sediment_region	MR - Overall the MR policies within this PU would be expected to significantly increase the area of both estuary and intertidal habitats especially in epoch 3. Therefore a major positive impact.	MR - Overall the MR policies within this PU would be expected to significantly increase the area of both estuary and intertidal habitats especially in epoch 3. Therefore a major positive impact.	MR - Overall the MR policies within this PU would be expected to significantly increase the area of both estuary and intertidal habitats especially in epoch 3. Therefore a major positive impact.	
11.14	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
11.14	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (0.8ha) as the intertidal responds to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (4ha) and mudflat (0.2ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (10.5ha) and mudflat (0.5ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
11.15	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.15	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.15	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
11.16	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
11.16	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
11.17	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
11.17	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
11.18	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
11.19	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
12.2	BAP habitat	Bracken_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.2	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
12.2	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
12.2	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of mudflat and saltmarsh habitat at this location but there is of a reduction of sandflat (0.2ha). Therefore a minor negative impact.	MR - The MR policy within this epoch will help to alleviate the coastal squeeze and will enable the estuary habitats to regain its natural balance of habitats. Therefore a moderate positive impact.	MR - The MR policy within this epoch will help to alleviate the coastal squeeze and will enable the estuary habitats to regain its natural balance of habitats. Therefore a moderate positive impact.	
12.3	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
12.3	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
12.3	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (0.1ha), mudflat (0.1ha) and saltmarsh (0.6ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	MR - The MR policy within this epoch will help to alleviate the coastal squeeze and will enable the estuary habitats to regain its natural balance of habitats. Therefore a moderate positive impact.	MR - The MR policy within this epoch will help to alleviate the coastal squeeze and will enable the estuary habitats to regain its natural balance of habitats. Therefore a moderate positive impact.	Habitat creation.
12.3	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.4	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
12.4	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
12.4	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of mudflat and sandflat habitat at this location but there is of a reduction of saltmarsh (0.1ha). Therefore a minor negative impact.	HTL - Policy has the potential to cause reduction of sandflat (0.1ha), mudflat (0.3ha) and saltmarsh (0.5ha) habitats as the intertidal responds to SLR. Therefore a minor negative impact.	HTL - Policy has the potential to cause reduction of sandflat (0.3ha), mudflat (0.7ha) and saltmarsh (1.2ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
12.5	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
12.5	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
12.6	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
12.8	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
12.6	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. Therefore a minor negative impact.	HTL - Policy has the potential to cause reduction of sandflat (0.7ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (1.7ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.8	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of mudflat or saltmarsh habitat at this location. Therefore a neutral negative impact.	HTL - Policy is not anticipated to cause a significant loss of mudflat habitat but has the potential to cause a reduction of saltmarsh (0.3ha) as habitats respond to SLR. Therefore a major negative impact.	HTL - Policy is not anticipated to cause a significant loss of mudflat habitat but has the potential to cause a reduction of saltmarsh (0.7ha) as habitats respond to SLR. Therefore a major negative impact.	Habitat creation.
12.8	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
12.9	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
12.9	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (0.5ha), mudflat (0.4ha) and saltmarsh (4.4ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	MR - The MR policy within this epoch will help to alleviate the coastal squeeze and will enable the estuary habitats to regain its natural balance of habitats. Therefore a moderate positive impact.	MR - The MR policy within this epoch will help to alleviate the coastal squeeze and will enable the estuary habitats to regain its natural balance of habitats. Therefore a moderate positive impact.	Habitat creation.
12.13	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
12.13	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
12.13	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.13	BAP habitat	Littoral_Sediment_region	HTL - Policy has the potential to cause reduction of sandflat (0.6ha), mudflat (0.1ha) and saltmarsh (0.9ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (3.2ha), mudflat (0.6ha) and saltmarsh (3.49ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (8.3ha), mudflat (1.4ha) and saltmarsh (8.8ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
12.14	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
12.14	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
12.14	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to cause a significant loss of mudflat habitat but has the potential to cause a reduction of sandflat (0.6ha) as habitats respond to SLR. Therefore a major negative impact.	HTL - Policy is not anticipated to cause a significant loss of mudflat habitat but has the potential to cause a reduction of sandflat (2.7ha) as habitats respond to SLR. Therefore a major negative impact.	HTL - Policy is not anticipated to cause a significant loss of mudflat habitat but has the potential to cause a reduction of sandflat (7.2ha) as habitats respond to SLR. Therefore a major negative impact.	Habitat creation.
12.16	BAP habitat	Acid_Grassland_region	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	
12.17	BAP habitat	Acid_Grassland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss of this habitat. Therefore a neutral impact.	
12.17	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.17	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	
12.17	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of mudflat habitat at this location but there is of a reduction of sandflat (0.3ha). Therefore a minor negative impact.	MR - The potential realignment of the railway would allow the coast to function more naturally. Therefore a moderate positive impact.	MR - The potential realignment of the railway would allow the coast to function more naturally. Therefore a moderate positive impact.	
12.17	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	
12.22	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
12.22	BAP habitat	Littoral_Sediment_region	MR - The policy in the first epoch would be for Managed Realignment, recognising that there are issues with existing defences in the area. Realignment would allow the coast to roll back naturally maintaining and creating intertidal habitat. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
12.24	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
12.24	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.2ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - This policy considers the possible realignment in land of the railway. Therefore a major positive impact.	MR - This policy considers the possible realignment in land of the railway. Therefore a major positive impact.	
12.24	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	
13.2	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
13.2	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	
13.3	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
13.3	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of mudflat habitat at this location but there is of a reduction of sandflat (0.1ha). Therefore a minor negative impact.	HTL - Policy has the potential to cause reduction of sandflat (0.5ha) and mudflat (0.7ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	HTL - Policy has the potential to cause reduction of sandflat (1.9ha) and mudflat (1.2ha) habitats as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
13.4	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.4	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location but there is of a reduction of mudflat (0.2ha). Therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.2ha) and mudflat (1ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.5ha) and mudflat (2.8ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
13.5	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.7ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (1.8ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
13.7	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
13.8	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
13.8	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
13.12	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
13.14	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
13.15	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
13.15	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - This policy is not anticipated to result in a significant loss or gain of this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
14.8	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
15.2	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
15.2	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
15.2	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
15.3	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
15.3	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
15.3	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.6ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR - Preferred policy is likely to result in the creation of some areras of intertidal habitat. Therefore a moderate positive impact.	Habitat creation.
15.5	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
15.5	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	
15.5	BAP habitat	Littoral_Sediment_region	MR - Preferred policy is likely to result in the creation of some areras of intertidal habitat. Therefore a moderate positive impact.	MR - Preferred policy is likely to result in the creation of some areras of intertidal habitat. Therefore a moderate positive impact.	MR - Preferred policy is likely to result in the creation of some areras of intertidal habitat. Therefore a moderate positive impact.	
15.6	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
16.3	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.4	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
16.4	BAP habitat	Littoral_Sediment_region	MR - Preferred policy is likely to result in the creation of some areas of intertidal habitat. Therefore a major positive impact.	MR - Preferred policy is likely to result in the creation of some areas of intertidal habitat. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
16.5	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
16.5	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
16.5	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.4ha), mudflat (0.4ha) and saltmarsh (1. ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR - The policy in this epoch would be aimed at alleviating the coastal squeeze within Foryd Bay and with NAI in epoch 3 potentially returning the Bay to a naturally functioning system. This policy has could therefore create additional intertidal habitat. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.5	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
16.9	BAP habitat	Coniferous_Woodland_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
16.9	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
16.9	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
16.9	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to cause a significant loss of sandflat habitat but has the potential to cause a reduction of saltmarsh (0.5ha) and mudflat (0.9ha) as habitats respond to SLR. Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.1ha), mudflat (4.3ha) and saltmarsh (1.9ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.3ha), mudflat (11ha) and saltmarsh (5ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
16.9	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
16.11	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.11	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
16.11	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.4ha), mudflat (0.3ha) and saltmarsh (0.3ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (1.9ha), mudflat (1.4ha) and saltmarsh (1.1ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR - Subject to Highways Authority funding this policy would look to realign the road inland. Therefore a major positive impact.	Habitat creation.
16.12	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
16.12	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
16.12	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat, mudflat and saltmarsh habitat at this location. Therefore a neutral negative impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat and saltmarsh habitat at this location but there is of a reduction of mudflat (0.3ha). Therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.2ha), mudflat (0.8ha) and saltmarsh (0.1ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
16.14	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat or mudflat habitat at this location. Therefore a neutral negative impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat or mudflat habitat at this location. Therefore a neutral negative impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location but there is of a reduction of mudflat (0.1ha). Therefore a minor negative impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.19	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
16.19	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat, mudflat or saltmarsh habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat and saltmarsh habitat at this location but there is of a reduction of mudflat (0.4ha). Therefore a minor negative impact.	HTL - Policy is not anticipated to result in a significant loss of saltmarsh habitat at this location but there is of a reduction of sandflat (0.1 a) and mudflat (0.9ha). Therefore a major negative impact.	Habitat creation.
16.21	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
16.21	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
16.21	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat and mudflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.3ha) and mudflat (0.5ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - Maintain defence but with the potential opportunity for realignment. This could result in a potential positive impact but the extent of the realignment has not been determined. Therefore indeterminable.	
16.22	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.22	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - Under this policy the intent is to use the width of the Green to landscape flood defence. Therefore a major positive impact.	
16.24	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
16.24	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
16.27	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
16.27	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
16.27	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location but there is of a reduction of mudflat (0.1ha). Therefore a minor negative impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location but there is of a reduction of mudflat (0.5ha). Therefore a minor negative impact.	
16.28	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.29	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
16.29	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
16.32	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	Habitat creation dependant on MR design.
16.32	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
16.32	BAP habitat	Littoral_Sediment_region	MR - This policy could potentially create additional habitat. Thus major positive impact.	MR - This policy could potentially create additional habitat. Thus major positive impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat, mudflat or saltmarsh habitat at this location. Therefore a neutral impact.	
16.33	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
16.33	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
16.33	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	
17.5	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
17.5	BAP habitat	Littoral_Sediment_region	MR - Under this policy the intent would be for managed realignment and roll back of the coast. Therefore a major positive impact.	MR - Under this policy the intent would be for managed realignment and roll back of the coast. Therefore a major positive impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
17.7	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
17.7	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of saltmarsh habitat at this location but there is of a reduction of sandflat (0.2ha). Therefore a minor negative impact.	HTL - Policy is not anticipated to result in a significant loss of saltmarsh habitat at this location but there is of a reduction of sandflat (1.2ha). Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (3.2ha) and saltmarsh (0.2ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
17.9	BAP habitat	Acid_Grassland_region	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.9	BAP habitat	Bracken_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.9	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.9	BAP habitat	Coniferous_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.9	BAP habitat	Dwarf_Shrub_Heath_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
17.9	BAP habitat	Fen_Marsh_Swamp_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
17.9	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.9	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
17.9	BAP habitat	Littoral_Sediment_region	MR - This policy is not anticipated to result in a significant loss or gain of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss or gain of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss or gain of this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.10	BAP habitat	Dwarf_Shrub_Heath_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
17.10	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
17.10	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
17.10	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
17.10	BAP habitat	Littoral_Sediment_region	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
17.11	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.11	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	
17.12	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
17.13	BAP habitat	Dwarf_Shrub_Heath_region	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
17.13	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
17.15	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
17.15	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat or mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of mudflat habitat at this location but there is of a reduction of sandflat (0.1ha). Therefore a minor negative impact.	HTL - Policy is not anticipated to result in a significant loss of mudflat habitat at this location but there is of a reduction of sandflat (0.3ha). Therefore a minor negative impact.	
17.16	BAP habitat	Littoral_Sediment_region	MR This policy would allow the natural behaviour of the shoreline system. Therefore a major positive impact.	MR This policy would allow the natural behaviour of the shoreline system. Therefore a major positive impact.	MR This policy would allow the natural behaviour of the shoreline system. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.18	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
17.18	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of saltmarsh or sandflat habitat at this location but there is of a reduction of mudflat (0.1ha). Therefore a minor negative impact.	HTL - Policy is not anticipated to result in a significant loss of saltmarsh or sandflat habitat at this location but there is of a reduction of mudflat (0.5ha). Therefore a minor negative impact.	HTL - Policy is not anticipated to cause a significant loss of saltmarsh habitat but has the potential to cause a reduction of sandflat (0.1ha) and mudflat (1.3ha) as habitats respond to SLR. Therefore a major negative impact.	Habitat creation.
17.19	BAP habitat	Acid_Grassland_region	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	MR - Under this policy the coastline would be allowed to evolve and roll back naturally. Therefore any change would be as a result of natural processes. Therefore a neutral impact.	
17.19	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.19	BAP habitat	Coniferous_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.19	BAP habitat	Dwarf_Shrub_Heath_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.19	BAP habitat	Fen_Marsh_Swamp_region	MR - This policy is not anticipated to cause significant changes in the extent of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to cause significant changes in the extent of this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to cause significant changes in the extent of this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.19	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.19	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
17.19	BAP habitat	Littoral_Sediment_region	MR - This policy could would allow the coast to roll back naturally potentially creating additional intertidal habitat over the long term. Therefore a major positive impact.	MR - This policy could would allow the coast to roll back naturally potentially creating additional intertidal habitat over the long term. Therefore a major positive impact.	MR - This policy could would allow the coast to roll back naturally potentially creating additional intertidal habitat over the long term. Therefore a major positive impact.	
17.19	BAP habitat	Standing_Open_Water_Canals_region	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat as the feature may become tidally influenced. Therefore a neutral impact.	
17.20	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
17.20	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat and saltmarsh habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of saltmarsh habitat at this location but there is of a reduction of mudflat (0.1ha). Therefore a minor negative impact.	HTL - Policy is not anticipated to result in a significant loss of saltmarsh habitat at this location but there is of a reduction of mudflat (0.3ha). Therefore a minor negative impact.	
17.21	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.21	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
17.22	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.22	BAP habitat	Littoral_Sediment_region	MR - Under this policy there is potential opportunity for new habitat development with the potential development of saline lagoons. Therefore a major positive impact.	MR - Under this policy there is potential opportunity for new habitat development with the potential development of saline lagoons. Therefore a major positive impact.	MR - Under this policy there is potential opportunity for new habitat development with the potential development of saline lagoons. Therefore a major positive impact.	
17.23	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.23	BAP habitat	Fen_Marsh_Swamp_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
17.23	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
17.23	BAP habitat	Littoral_Rock_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
17.23	BAP habitat	Littoral_Sediment_region	MR - This policy could would allow the coast to roll back naturally potentially creating additional intertidal habitat over the long term. Therefore a major positive impact.	MR - This policy could would allow the coast to roll back naturally potentially creating additional intertidal habitat over the long term. Therefore a major positive impact.	MR - This policy could would allow the coast to roll back naturally potentially creating additional intertidal habitat over the long term. Therefore a major positive impact.	
18.3	BAP habitat	Fen_Marsh_Swamp_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
18.3	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
18.6	BAP habitat	Dwarf_Shrub_Heath_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
18.6	BAP habitat	Fen_Marsh_Swamp_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
18.6	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
18.6	BAP habitat	Littoral_Sediment_region	MR - This policy relates to the management of the weir structure. The shingle bank would be allowed to roll back naturally. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
18.6	BAP habitat	Standing_Open_Water_Canals_region	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
18.7	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	
18.9	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	MR - Maintain defence but with the potential opportunity for realignment. This could result in a potential positive impact but the extent of the realignment has not been determined. Therefore indeterminate.	
18.10	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
18.10	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.2ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	
18.11	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
18.11	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
18.11	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - There is a potential risk of a reduction of sandflat (0.1ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	MR - Under this policy the opportunity for future adjustment of defence alignment is maintained. This could result in a potential positive impact but the extent of the realignment has not been determined. Therefore indeterminate.	
18.14	BAP habitat	Bracken_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
18.14	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
18.15	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
18.15	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat habitat at this location. Therefore a neutral impact.	MR - Under this policy the opportunity for future adjustment of defence alignment is maintained. This could result in a potential positive impact but the extent of the realignment has not been determined. Therefore indeterminate.	
18.16	BAP habitat	Dwarf_Shrub_Heath_region	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
18.16	BAP habitat	Littoral_Sediment_region	MR - The policy is to develop a planning frame to minimise future need for defence. The extent of realignment is not yet determined. Therefore indeterminate.	MR - The policy is to develop a planning frame to minimise future need for defence. The extent of realignment is not yet determined. Therefore indeterminate.	MR - The policy is to develop a planning frame to minimise future need for defence. The extent of realignment is not yet determined. Therefore indeterminate.	
19.2	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
19.2	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
19.4	BAP habitat	Coastal_and_floodplain grazing marsh	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
19.7	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	
19.12	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
19.12	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
19.14	BAP habitat	Fen_Marsh_Swamp_region	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
19.14	BAP habitat	Coastal_and_floodplain grazing marsh	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
19.14	BAP habitat	Littoral_Sediment_region	MR - The policy would need to be examined in local detail. The potential for creation of additional habitat exists. Therefore a major positive impact.	MR - The policy would need to be examined in local detail. The potential for creation of additional habitat exists. Therefore a major positive impact.	MR - The policy would need to be examined in local detail. The potential for creation of additional habitat exists. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.2	BAP habitat	Dwarf_Shrub_Heath_region	HTL - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	
20.2	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
20.2	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (1.3ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (6.3ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (16.3ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
20.3	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
20.3	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to cause a significant loss of mudflat habitat but has the potential to cause a reduction of sandflat (1.2ha) as habitats respond to SLR. Therefore a major negative impact.	HTL - Policy is not anticipated to cause a significant loss of mudflat habitat but has the potential to cause a reduction of sandflat (6.1ha) as habitats respond to SLR. Therefore a major negative impact.	MR - Possible realignment forward, to be considered in conjunction with management at Deganwy. Therefore a moderate negative impact.	Habitat creation.
20.4	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
20.4	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.4	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat or mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat or mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat or mudflat habitat at this location. Therefore a neutral impact.	
20.5	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
20.5	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
20.5	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
20.5	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat, saltmarsh or mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of saltmarsh habitat at this location but there is of a reduction of sandflat (0.1ha) and mudflat (0.3ha). Therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.3ha), mudflat (0.9ha) and saltmarsh (0.1ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
20.6	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
20.6	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat, saltmarsh or mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of sandflat, saltmarsh or mudflat habitat at this location. Therefore a neutral impact.	MR - This policy is not anticipated to result in a significant loss or gain of this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.7	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
20.7	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat, saltmarsh or mudflat habitat at this location. Therefore a neutral impact.	HTL - Policy is not anticipated to result in a significant loss of saltmarsh or sandflat habitat at this location but there is of a reduction of mudflat (0.2ha). Therefore a minor negative impact.	HTL - Policy is not anticipated to result in a significant loss of saltmarsh or sandflat habitat at this location but there is of a reduction of mudflat (0.5ha). Therefore a minor negative impact.	
20.8	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
20.9	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL/MR - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
20.10	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
20.10	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
20.11	BAP habitat	Calcareous_Grassland_region	HTL - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to significant affect this habitat. Therefore a neutral impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.11	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	
20.11	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
20.11	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of mudflat habitat at this location but there is of a reduction of sandflat (2.5ha). Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (12.3ha) and mudflat (0.1ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR - In the long term would ensure that coastal squeeze would not be an issue to the intertidal habitat. Therefore a neutral impact.	Habitat creation.
20.15	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
20.15	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	Habitat creation dependant on MR design.
20.15	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
20.15	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.5ha), mudflat (0.3ha) and saltmarsh (0.3ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (2.5ha), saltmarsh (1.2ha) and mudflat (1.3ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	MR - Realignment would be through the Nature Reserve with the potential to increase intertidal habitat. Therefore a major positive impact.	Habitat creation.

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.15	BAP habitat	Standing_Open_Water_Canals_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - This policy would cause a loss of this feature. Therefore a major negative impact.	Habitat creation dependant on MR design.
20.16	BAP habitat	Broadleaved_Mixed_Yew_Woodland_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
20.16	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	
20.16	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
20.16	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of saltmarsh or sandflat habitat at this location but there is of a reduction of mudflat (0.3ha). Therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.2ha), saltmarsh (0.3ha) and mudflat (1.6ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.5ha), saltmarsh (0.7ha) and mudflat (4.2ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
20.17	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	
20.17	BAP habitat	Coastal_and_floodplain grazing marsh	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	HTL - Policy would potentially protect habitat. Therefore a major positive impact.	

PDZ Unit	Type	Feature	Up to 2025	Up to 2055	Up to 2105	Mitigation
20.17	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	
20.17	BAP habitat	Littoral_Sediment_region	HTL - There is a potential risk of a reduction of sandflat (0.1ha), saltmarsh (0.3ha) and mudflat (0.2ha) habitat as the intertidal responds to SLR. The area at risk is considered insignificant therefore a minor negative impact.	HTL - There is a potential risk of a reduction of sandflat (0.1ha), saltmarsh (1.2ha) and mudflat (0.9ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	HTL - There is a potential risk of a reduction of sandflat (1.6ha), saltmarsh (3.2ha) and mudflat (2.3ha) habitat as the intertidal responds to SLR. Therefore a major negative impact.	Habitat creation.
20.18	BAP habitat	Littoral_Sediment_region	HTL - Policy is not anticipated to result in a significant loss of sandflat, mudflat and saltmarsh habitat at this location. Therefore a neutral impact.	MR - The policy would retire defence to the railway line. Therefore a major positive impact.	MR - The policy would retire defence to the railway line. Therefore a major positive impact.	
20.19	BAP habitat	Fen_Marsh_Swamp_region	HTL - Under this policy the terrestrial habitat features would potentially be protected. Therefore a major positive impact.	MR - Policy has the potential to cause a reduction of habitat. Therefore a major negative impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	Habitat creation dependant on MR design.
20.19	BAP habitat	Littoral_Rock_region	HTL - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	MR - This policy is not anticipated to have a significant affect on this habitat. Therefore a neutral impact.	NAI - Being the preferred policy for this whole unit, therefore no direct or indirect effects on the interest features as a result of coastal management policy is expected. Therefore a neutral impact.	

BAP Habitat - Predicted Intertidal BAP Habitat Extents at Risk									
Policy Unit	Type	2025	2055	2105	Name	Total within PU (ha)	BAP Habitat Area at Risk (ha)		
							Epoch 1	Epoch 2	Epoch 3
2.2	Intertidal Sand	HTL	HTL	MR	Little Haven	1.94	0.0	0.1	
2.4	Intertidal Sand	HTL	HTL	MR	Southern and central Broad Haven	10.30	0.1	0.5	
2.6	Intertidal Sand	HTL	HTL	MR	Haroldston Hill	3.94	0.0	0.2	
3.10	Intertidal Sand	HTL	HTL	HTL	Porth Gain	1.79	0.0	0.1	0.2
3.3	Intertidal Sand	HTL	HTL	HTL	Solva Harbour	2.80	0.0	0.1	0.4
3.8	Intertidal Sand	HTL	MR	MR	Whitesands bay	14.91	0.1		
4.12	Intertidal Sand	HTL	HTL	HTL	Cwm-yr-Eglwys	0.76	0.0	0.0	0.1
4.15	Intertidal Mud	HTL	HTL	MR	Newport Parrog	4.44	0.0	0.2	
4.15	Intertidal Sand	HTL	HTL	MR	Newport Parrog	5.22	0.1	0.3	
4.15	Saltmarsh	HTL	HTL	MR	Newport Parrog	1.30	0.1	0.2	
4.2	Intertidal Sand	HTL	HTL	HTL	Fishguard Harbour	15.27	0.2	0.8	2.0
4.3	Intertidal Sand	HTL	MR	MR	The Parrog and Goodwick Moor	5.28	0.1		
4.5	Intertidal Mud	HTL	HTL	HTL	Hill Terrace	0.53	0.0	0.0	0.1
4.7	Intertidal Sand	HTL	HTL	HTL	Lower Town Quay	1.39	0.0	0.1	0.2
5.11	Intertidal Mud	HTL	HTL	HTL	Cardigan North	1.13	0.0	0.1	0.1
5.12	Intertidal Mud	HTL	HTL	HTL	Cardigan South	1.09	0.0	0.1	0.1
5.5	Intertidal Sand	HTL	HTL	HTL	St Dogmaels north	2.78	0.0	0.1	0.4
5.7	Intertidal Mud	HTL	HTL	MR	Coronation Drive	4.50	0.0	0.2	
5.7	Intertidal Sand	HTL	HTL	MR	Coronation Drive	11.49	0.1	0.6	
5.8	Intertidal Sand	HTL	HTL	HTL	Gwbert Road	10.56	0.1	0.5	1.4
6.2	Intertidal Sand	HTL	HTL	HTL	Aberporth	2.76	0.0	0.1	0.4
7.2	Intertidal Sand	HTL	HTL	HTL	Traeth y Dolau, New Quay Harbour to Penp	3.90	0.0	0.2	0.5
7.5	Intertidal Sand	HTL	HTL	MR	Cei Bach	7.52	0.1	0.4	
8.4	Intertidal Sand	HTL	HTL	HTL	Aberaeron North Beach	8.58	0.1	0.4	1.1
9.3	Intertidal Sand	HTL	HTL	HTL	Aberystwyth Harbour	1.34	0.0	0.1	0.2
9.7	Intertidal Sand	HTL	HTL	HTL	South Marine Terrace	4.07	0.0	0.2	0.5
9.9	Intertidal Sand	HTL	HTL	HTL/ATL	Marine Terrace and Victoria Terrace	4.70	0.0	0.2	0.6
10.11	Intertidal Mud	HTL	HTL	HTL	Gogarth	2.25	0.0	0.1	0.3
10.11	Intertidal Sand	HTL	HTL	HTL	Gogarth	7.95	0.1	0.4	1.0
10.11	Saltmarsh	HTL	HTL	HTL	Gogarth	26.29	1.1	3.9	10.3
10.12	Intertidal Mud	HTL	HTL	HTL	Dyfi North	83.08	0.8	4.2	10.8
10.12	Intertidal Sand	HTL	HTL	HTL	Dyfi North	135.33	1.4	6.8	17.6
10.13	Intertidal Sand	HTL	HTL	HTL	Aberdyfi	9.04	0.1	0.5	1.2
10.16	Intertidal Mud	HTL	HTL	HTL	Tywyn	7.73	0.1	0.4	1.0
10.16	Intertidal Sand	HTL	HTL	HTL	Tywyn	26.92	0.3	1.3	3.5
10.17	Intertidal Mud	HTL	HTL	HTL	Dysynni railway	6.86	0.1	0.3	0.9
10.17	Intertidal Sand	HTL	HTL	HTL	Dysynni railway	34.21	0.3	1.7	4.4
10.2	Intertidal Sand	HTL	HTL	MR	Borth Village	35.48	0.4	1.8	
10.3	Intertidal Sand	HTL	MR	MR	Borth Golf Course	45.89	0.5		
10.6	Intertidal Mud	HTL	HTL	MR	Cors Fochno	355.28	3.6	17.8	
10.6	Intertidal Sand	HTL	HTL	MR	Cors Fochno	189.41	1.9	9.5	
10.6	Saltmarsh	HTL	HTL	MR	Cors Fochno	362.92	14.5	54.4	
10.7	Intertidal Mud	HTL	HTL	MR	Dyfi Junction	1.49	0.0	0.1	
10.7	Saltmarsh	HTL	HTL	MR	Dyfi Junction	29.01	1.2	4.4	
11.1	Intertidal Sand	HTL	HTL	HTL	Rola	17.35	0.2	0.9	2.3
11.11	Intertidal Sand	HTL	HTL	HTL	Penmaenpool	1.96	0.0	0.1	0.3
11.11	Saltmarsh	HTL	HTL	HTL	Penmaenpool	0.28	0.0	0.0	0.1
11.12	Saltmarsh	HTL	MR	MR	Upper estuary	46.62	1.9		
11.14	Intertidal Mud	HTL	HTL	HTL	Barmouth South	4.04	0.0	0.2	0.5
11.14	Intertidal Sand	HTL	HTL	HTL	Barmouth South	80.51	0.8	4.0	10.5
11.15	Intertidal Sand	HTL	MR	MR	Barmouth North	19.77	0.2		
11.16	Intertidal Mud	HTL	HTL	HTL	Llanaber	4.42	0.0	0.2	0.6

BAP Habitat - Predicted Intertidal BAP Habitat Extents at Risk									
Policy Unit	Type	2025	2055	2105	Name	Total within PU (ha)	BAP Habitat Area at Risk (ha)		
							Epoch 1	Epoch 2	Epoch 3
11.16	Intertidal Sand	HTL	HTL	HTL	Llanaber	26.47	0.3	1.3	3.4
11.3	Intertidal Sand	HTL	HTL	HTL	Friog Cliffs	8.02	0.1	0.4	1.0
11.4	Intertidal Mud	HTL	MR	NAI	Ro Wen coast	17.05	0.2		
11.4	Intertidal Sand	HTL	MR	NAI	Ro Wen coast	40.88	0.4		
11.6	Intertidal Mud	HTL	MR	NAI	Fairbourne Embankment	37.41	0.4		
11.6	Intertidal Sand	HTL	MR	NAI	Fairbourne Embankment	17.26	0.2		
11.6	Saltmarsh	HTL	MR	NAI	Fairbourne Embankment	43.42	1.7		
11.8	Intertidal Sand	HTL	HTL	HTL	Morfa Mawddach	27.15	0.3	1.4	3.5
11.8	Saltmarsh	HTL	HTL	HTL	Morfa Mawddach	3.81	0.2	0.6	1.5
11.9	Intertidal Mud	HTL	MR	MR	Fegla	6.83	0.1		
11.9	Intertidal Sand	HTL	MR	MR	Fegla	28.77	0.3		
11.9	Saltmarsh	HTL	MR	MR	Fegla	4.56	0.2		
12.13	Intertidal Mud	HTL	HTL	HTL	The Cob and Porthmadog	10.98	0.1	0.5	1.4
12.13	Intertidal Sand	HTL	HTL	HTL	The Cob and Porthmadog	63.59	0.6	3.2	8.3
12.13	Saltmarsh	HTL	HTL	HTL	The Cob and Porthmadog	22.44	0.9	3.4	8.8
12.14	Intertidal Mud	HTL	HTL	HTL	Borth-y-Gest	1.14	0.0	0.1	0.1
12.14	Intertidal Sand	HTL	HTL	HTL	Borth-y-Gest	54.76	0.5	2.7	7.1
12.17	Intertidal Sand	HTL	MR	MR	Criccieth Shingle Banks	27.11	0.3		
12.18	Intertidal Sand	HTL	HTL	MR	Criccieth Harbour	6.52	0.1	0.3	
12.2	Intertidal Sand	HTL	MR	MR	Artro Southern Spit	20.87	0.2		
12.24	Intertidal Sand	HTL	MR	MR	Afon Wen	15.71	0.2		
12.3	Intertidal Mud	HTL	MR	MR	Artro Estuary South	13.51	0.1		
12.3	Intertidal Sand	HTL	MR	MR	Artro Estuary South	8.86	0.1		
12.3	Saltmarsh	HTL	MR	MR	Artro Estuary South	16.05	0.6		
12.4	Intertidal Mud	HTL	HTL	HTL	Artro Estuary East	5.73	0.1	0.3	0.7
12.4	Intertidal Sand	HTL	HTL	HTL	Artro Estuary East	2.31	0.0	0.1	0.3
12.4	Saltmarsh	HTL	HTL	HTL	Artro Estuary East	2.98	0.1	0.4	1.2
12.6	Intertidal Sand	HTL	HTL	HTL	Llandanwg Headland	13.40	0.1	0.7	1.7
12.8	Intertidal Mud	HTL	HTL	HTL	Harlech Valley	0.40	0.0	0.0	0.1
12.8	Saltmarsh	HTL	HTL	HTL	Harlech Valley	1.70	0.1	0.3	0.7
12.9	Intertidal Mud	HTL	MR	MR	Talsarnau	36.10	0.4		
12.9	Intertidal Sand	HTL	MR	MR	Talsarnau	52.93	0.5		
12.9	Saltmarsh	HTL	MR	MR	Talsarnau	110.37	4.4		
13.11	Intertidal Mud	HTL	MR	MR	The Warren	8.00	0.1		
13.11	Intertidal Sand	HTL	MR	MR	The Warren	33.46	0.3		
13.12	Intertidal Mud	HTL	MR	MR	Abersoch	19.06	0.2		
13.12	Intertidal Sand	HTL	MR	MR	Abersoch	12.01	0.1		
13.13	Intertidal Mud	HTL	HTL	HTL	Penbennar	2.54	0.0	0.1	0.3
13.13	Intertidal Sand	HTL	HTL	HTL	Penbennar	1.70	0.0	0.1	0.2
13.14	Intertidal Sand	HTL	MR	NAI	Borth Fawr Central	37.20	0.4		
13.15	Intertidal Sand	HTL	MR	NAI	Machroes	9.59	0.1		
13.2	Intertidal Sand	HTL	MR	MR	Abererch	17.44	0.2		
13.3	Intertidal Mud	HTL	HTL	HTL	Glan Y Don	8.92	0.1	0.4	1.2
13.3	Intertidal Sand	HTL	HTL	HTL	Glan Y Don	14.38	0.1	0.7	1.9
13.4	Intertidal Mud	HTL	HTL	HTL	Pwllheli Harbour and entrance	21.25	0.2	1.1	2.8
13.4	Intertidal Sand	HTL	HTL	HTL	Pwllheli Harbour and entrance	4.15	0.0	0.2	0.5
13.5	Intertidal Sand	HTL	HTL	HTL	Pwllheli Centre	13.94	0.1	0.7	1.8
13.7	Intertidal Sand	HTL	MR	MR	Golf Course	8.68	0.1		
13.8	Intertidal Sand	HTL	MR	MR	Traeth Crugan	6.73	0.1		
14.8	Intertidal Sand	HTL	MR	HTL	Aberdaron Village and coastal slope	7.74	0.1		0.0
15.2	Intertidal Mud	HTL	MR	MR	Porth Dinllaen, including Morfa Nefyn	6.38	0.1		
15.2	Intertidal Sand	HTL	MR	MR	Porth Dinllaen, including Morfa Nefyn	9.63	0.1		

BAP Habitat - Predicted Intertidal BAP Habitat Extents at Risk									
Policy Unit	Type	2025	2055	2105	Name	Total within PU (ha)	BAP Habitat Area at Risk (ha)		
							Epoch 1	Epoch 2	Epoch 3
15.3	Intertidal Sand	HTL	HTL	MR	Porth Nefyn West	11.63	0.1	0.6	
16.11	Intertidal Mud	HTL	HTL	MR	Ffordd Yr Aber to Afon Carogg.	28.13	0.3	1.4	
16.11	Intertidal Sand	HTL	HTL	MR	Ffordd Yr Aber to Afon Carogg.	36.92	0.4	1.8	
16.11	Saltmarsh	HTL	HTL	MR	Ffordd Yr Aber to Afon Carogg.	7.29	0.3	1.1	
16.12	Intertidal Mud	HTL	HTL	HTL	Caernarfon	6.24	0.1	0.3	0.8
16.12	Intertidal Sand	HTL	HTL	HTL	Caernarfon	1.54	0.0	0.1	0.2
16.12	Saltmarsh	HTL	HTL	HTL	Caernarfon	0.21	0.0	0.0	0.1
16.14	Intertidal Mud	HTL	HTL	HTL	Y Felinheli	1.11	0.0	0.1	0.1
16.19	Intertidal Mud	HTL	HTL	HTL	Porthaethwy	6.93	0.1	0.3	0.9
16.19	Intertidal Sand	HTL	HTL	HTL	Porthaethwy	0.83	0.0	0.0	0.1
16.21	Intertidal Mud	HTL	HTL	MR	Beaumaris West	9.17	0.1	0.5	
16.21	Intertidal Sand	HTL	HTL	MR	Beaumaris West	5.00	0.1	0.3	
16.22	Intertidal Sand	HTL	HTL	MR	Beaumaris East	2.52	0.0	0.1	
16.24	Intertidal Mud	HTL	HTL	HTL	Llanfaes	10.97	0.1	0.5	1.4
16.24	Intertidal Sand	HTL	HTL	HTL	Llanfaes	4.28	0.0	0.2	0.6
16.27	Intertidal Mud	HTL	HTL	HTL	Garth Point and Dock Yard	3.45	0.0	0.2	0.4
16.28	Intertidal Mud	HTL	HTL	MR	Hirael	6.56	0.1	0.3	
16.29	Intertidal Mud	HTL	HTL	HTL	Porth Penrhyn	27.56	0.3	1.4	3.6
16.29	Intertidal Sand	HTL	HTL	HTL	Porth Penrhyn	1.12	0.0	0.1	0.1
16.3	Intertidal Sand	HTL	MR	MR	Dinas Dinlle	14.49	0.1		
16.33	Intertidal Sand	HTL	HTL	MR	Llanfairfechan	166.86	1.7	8.3	
16.33	Saltmarsh	HTL	HTL	MR	Llanfairfechan	4.80	0.2	0.7	
16.5	Intertidal Mud	HTL	MR	NAI	Foryd Bay	43.85	0.4		
16.5	Intertidal Sand	HTL	MR	NAI	Foryd Bay	39.37	0.4		
16.5	Saltmarsh	HTL	MR	NAI	Foryd Bay	34.30	1.4		
16.9	Intertidal Mud	HTL	HTL	HTL	Embankment and village	85.09	0.9	4.3	11.1
16.9	Intertidal Sand	HTL	HTL	HTL	Embankment and village	2.24	0.0	0.1	0.0
16.9	Saltmarsh	HTL	HTL	HTL	Embankment and village	12.91	0.5	0.6	0.0
17.11	Intertidal Sand	HTL	HTL	HTL	Porth Diana	0.95	0.0	0.0	0.1
17.12	Intertidal Sand	HTL	HTL	HTL	Trearddur	5.79	0.1	0.3	0.8
17.13	Intertidal Sand	HTL	HTL	HTL	Porth Dafarch	1.27	0.0	0.1	0.2
17.15	Intertidal Mud	HTL	HTL	HTL	Holyhead	0.73	0.0	0.0	0.1
17.15	Intertidal Sand	HTL	HTL	HTL	Holyhead	2.53	0.0	0.1	0.3
17.18	Intertidal Mud	HTL	HTL	HTL	Stanley Embankment	10.15	0.1	0.5	1.3
17.18	Intertidal Sand	HTL	HTL	HTL	Stanley Embankment	0.87	0.0	0.0	0.1
17.2	Intertidal Mud	HTL	HTL	HTL	Valley	1.90	0.0	0.1	0.2
17.2	Saltmarsh	HTL	HTL	HTL	Valley	0.23	0.0	0.0	0.1
17.6	Intertidal Sand	HTL	HTL	MR	Rhosneigr	16.24	0.2	0.8	
17.7	Intertidal Sand	HTL	HTL	HTL	Crigyll valley south	24.45	0.2	1.2	3.2
17.7	Saltmarsh	HTL	HTL	HTL	Crigyll valley south	0.51	0.0	0.1	0.2
18.1	Intertidal Sand	HTL	HTL	HTL	Cemaes Harbour	1.16	0.0	0.1	0.2
18.11	Intertidal Sand	HTL	HTL	MR	Treath Mawr Promenade	2.66	0.0	0.1	
18.9	Intertidal Sand	HTL	HTL	MR	Ffordd y Traeth	1.28	0.0	0.1	
19.1	Intertidal Mud	HTL	HTL	MR	Benllech Beach road	1.39	0.0	0.1	
19.1	Intertidal Sand	HTL	HTL	MR	Benllech Beach road	18.85	0.2	0.9	
19.12	Intertidal Sand	HTL	HTL	MR	Red Wharf Bay	44.83	0.4	2.2	
20.10	Intertidal Sand	HTL	HTL	HTL	Traeth Melyn	2.87	0.0	0.1	0.4
20.1	Intertidal Sand	HTL	HTL	HTL	Gerizim	30.45	0.3	1.5	4.0
20.11	Intertidal Mud	HTL	HTL	MR	West Shore and Golf Course	2.12	0.0	0.1	
20.11	Intertidal Sand	HTL	HTL	MR	West Shore and Golf Course	245.48	2.5	12.3	
20.15	Intertidal Mud	HTL	HTL	MR	Llandudno Junction and Ganol Estuary	26.27	0.3	1.3	
20.15	Intertidal Sand	HTL	HTL	MR	Llandudno Junction and Ganol Estuary	49.01	0.5	2.5	

BAP Habitat - Predicted Intertidal BAP Habitat Extents at Risk									
Policy Unit	Type	2025	2055	2105	Name	Total within PU (ha)	BAP Habitat Area at Risk (ha)		
							Epoch 1	Epoch 2	Epoch 3
20.15	Saltmarsh	HTL	HTL	MR	Llandudno Junction and Ganol Estuary	7.98	0.3	1.2	
20.16	Intertidal Mud	HTL	HTL	HTL	Glan Conwy	31.91	0.3	1.6	4.1
20.16	Intertidal Sand	HTL	HTL	HTL	Glan Conwy	3.96	0.0	0.2	0.5
20.16	Saltmarsh	HTL	HTL	HTL	Glan Conwy	1.69	0.1	0.3	0.7
20.17	Intertidal Mud	HTL	HTL	HTL	Glan Conwy to Tal-y-Cafn	17.81	0.2	0.9	2.3
20.17	Intertidal Sand	HTL	HTL	HTL	Glan Conwy to Tal-y-Cafn	12.19	0.1	0.6	1.6
20.17	Saltmarsh	HTL	HTL	HTL	Glan Conwy to Tal-y-Cafn	8.11	0.3	1.2	3.2
20.2	Intertidal Sand	HTL	HTL	HTL	Penmaenmawr	125.07	1.3	6.3	16.3
20.3	Intertidal Sand	HTL	HTL	MR	Conwy Morfa	121.15	1.2	6.1	
20.4	Intertidal Mud	HTL	HTL	HTL	Conwy Marina	0.66	0.0	0.0	0.1
20.4	Intertidal Sand	HTL	HTL	HTL	Conwy Marina	0.47	0.0	0.0	0.1
20.5	Intertidal Mud	HTL	HTL	HTL	Conwy	6.82	0.1	0.3	0.9
20.5	Intertidal Sand	HTL	HTL	HTL	Conwy	2.09	0.0	0.1	0.3
20.5	Saltmarsh	HTL	HTL	HTL	Conwy	0.36	0.0	0.1	0.1
20.7	Intertidal Mud	HTL	HTL	HTL	Causeway	4.09	0.0	0.2	0.5
20.8	Intertidal Mud	HTL	HTL	MR	Deganwy	21.96	0.2	1.1	
20.8	Intertidal Sand	HTL	HTL	MR	Deganwy	4.11	0.0	0.2	
20.8	Saltmarsh	HTL	HTL	MR	Deganwy	0.38	0.0	0.1	

ANNEX E - SEA SCOPING REPORT



West of Wales Shoreline Management Plan 2 Strategic Environmental Assessment Scoping Report

Pembrokeshire County Council

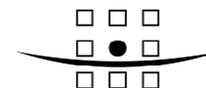
June 2010
Final Report
9T9001



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ROYAL HASKONING

**HASKONING UK LTD.
ENVIRONMENT**

Stratus House
Emperor Way
Exeter, Devon EX1 3QS
United Kingdom
+44 (0)1392 447999 Telephone
Fax
info@exeter.royalhaskoning.com E-mail
www.royalhaskoning.com Internet

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Drafted by Randolph Velterop, Laura Covington, Peter Brunner
Checked by Peter Thornton
Date/initials check ...22/6/2010 ...PT.....
Approved by Peter Thornton
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FOREWORD

This SEA Scoping Report is intended to obtain further information, input and cohesiveness in developing the West of Wales SMP2, ensuring that it is sustainable in that it provides opportunities for environmental enhancements as well as protecting the built and human environment.

The key contact for the SEA is Peter Thornton.

Responses should be sent by email to p.thornton@royalhaskoning.com or to the following address:

Haskoning UK Ltd
Stratus House
Emperor Way
Exeter
Devon
EX1 3QS

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CONTENTS

			Page
1		INTRODUCTION	1
	1.1	Purpose	1
	1.2	SEA Framework	1
	1.3	Report Structure	3
2		BACKGROUND TO THE WEST OF WALES SMP2	5
	2.1	Introduction to Shoreline Management Plans (SMPs)	5
	2.2	Introduction to the West of Wales SMP2	6
	2.3	Aims and Objectives of the West of Wales SMP2	9
3		CONTEXT TO THE WEST OF WALES SMP2	13
	3.1	Introduction	13
	3.2	Relationship with Other Plans, Policies and Programmes	13
	3.3	Baseline Environment	17
4		CURRENT AND FUTURE LAND USE	19
	4.1	Introduction	19
	4.2	Overview	19
5		THE WATER ENVIRONMENT	23
	5.1	Introduction	23
	5.2	Overview	23
6		COASTAL PROCESSES AND COASTAL MANAGEMENT	33
	6.1	Introduction	33
	6.2	Overview	33
7		GEOLOGY AND SOILS	39
	7.1	Introduction	39
	7.2	Overview	39
8		COASTAL LANDSCAPES	55
	8.1	Introduction	55
	8.2	Overview	55
9		BIODIVERSITY	59
	9.1	Introduction	59
	9.2	Overview	59
10		THE HISTORIC ENVIRONMENT	71
	10.1	Introduction	71
	10.2	Overview	71
11		MATERIAL ASSETS	75
	11.1	Introduction	75
	11.2	Overview	75

12	CLIMATE CHANGE	83
12.1	Introduction	83
12.2	Scenarios	83
13	CURRENT AND FUTURE RISKS	85
13.1	Introduction	85
13.2	Current and Future Land Use and Communities	85
13.3	The Water Environment	86
13.4	The Coastal Environment and Geology	87
13.5	Biodiversity	88
13.6	The Historic Environment	88
13.7	Material Assets	89
14	SCOPING AND SEA METHODOLOGY	91
14.1	Sustainability Issues and Constraints for the Study Area	91
15	SCOPING AND SEA METHODOLOGY	95
15.1	Active Use of the SEA within the SMP2 Process	95
15.2	Context and Methodology	95
15.3	Alternative Options/Strategies	95
15.4	Scoping in/out of SEA Issues	95
15.5	SEA Methodology of the West of Wales SMP2	97
15.6	Prediction and Evaluation Methodology	98
15.7	Introduction to the SEA Objectives	101
15.8	Cumulative Assessment	105
15.9	Habitat Regulations Assessment	105
15.10	Environmental Report	106
16	THE NEXT STEPS	107
16.1	Approach to Consultation	107
16.2	Key Issues Raised through Consultation	108
17	REFERENCES	109
18	ABBREVIATIONS AND ACRONYMS	111
19	GLOSSARY OF TERMS	113
APPENDIX A	KEY RELEVANT EXISTING POLICIES, PLANS AND STRATEGIES	119
APPENDIX B	THEMATIC REVIEW ASSET TABLES	147
APPENDIX C	INTERNATIONAL NATURE CONSERVATION SITE DETAILS	149
APPENDIX D	SSSI SITE CHARACTERISTICS FOR THE WEST OF WALES	151
APPENDIX E	CONSULTATION RESPONSES RECEIVED ON DRAFT SEA SCOPING REPORT AND HOW THE RESPONSES HAVE BEEN DEALT WITH IN THE FINAL SEA SCOPING REPORT	153

TABLES

Table 2.1	Shoreline Management Policy Options	5
Table 4.1	Cities (in bold), Towns and Seaside Resorts in the West of Wales SMP2 Study Area	19
Table 5.1	2008 Bathing Waters Failing to Meet Mandatory (imperative) Standard in West of Wales.....	23
Table 5.2	Results of Monitoring for Ecologically Significant Species (Shellfish Waters) – Based on 2007 Data	25
Table 5.3	Estuary Classifications	26
Table 5.4	Activities pursued by UK visitors whilst on holiday at the Welsh seaside	28
Table 7.1	Geological SSSIs and features within the West of Wales SMP2 Study Area	40
Table 7.2	Coastal GCR Sites and Relevant SSSIs in West of Wales SMP2 Study Area	42
Table 7.3	Coastal Regionally Important Geodiversity Sites (RIGS) in the SMP2	46
Table 8.1	World Heritage Designations within the SMP2 Study Area.....	55
Table 8.2	AONB Designations within the SMP2 Study Area.....	56
Table 8.3	National Parks Designations within the SMP2 Study Area	57
Table 8.4	Heritage Coast Designations within the SMP2 Study Area.....	57
Table 9.1	West of Wales SMP2 Site Designations and Reserves	59
Table 9.2	Table-Map of West of Wales showing the main salmon rivers and denoting those with Salmon Action Plans (*) and those designated as Special Areas of Conservation (\$) in which salmon must be maintained or restored to favourable conservation status. Table denotes current compliance against the management objective and predicted compliance in 2013.	63
Table 9.3	National Nature Reserves (NNRs) within the West of Wales SMP2.....	64
Table 9.4	Local Nature Reserves (LNRs) within the SMP2 Study Area	65
Table 10.1	Protected Wreck Sites in the West of Wales SMP2 Study Area.....	72
Table 11.1	Numbers and types of marinas and moorings within the West of Wales SMP2 study area and susceptibility to erosion.....	75
Table 11.2	Waste Management Sites within the West of Wales SMP2	77
Table 14.1	Key Sustainability Issues in the Region	91
Table 14.2	Sustainability Issues within the West of Wales SMP2 Study Area identified from the Plan and Policy Review.....	92
Table 15.1	Selected EIA Parameters for SEA.....	96
Table 15.2	Significance Criteria to be used in the Assessment of Impacts	100
Table 15.3	Method of Impact Derivation for Environmental Effect and Likely Significance	101
Table 15.4	West of Wales SMP2 Sustainability Objectives and Indicators.....	102

FIGURES

Figure 1.1	The West of Wales SMP2 Study Area	4
Figure 4.1	Land Use in the West of Wales SMP2 Study Area	22
Figure 5.1	Designated Bathing Water Compliance (2008) for West of Wales	24
Figure 5.2	Estuarine Water Body Types in West of Wales	29
Figure 5.3	Coastal Water Body Types in West of Wales	29
Figure 5.4	Chemical Status for Estuarine and Coastal Waters in West of Wales	30
Figure 5.5	Ecological Status for Estuarine and Coastal Waters in West of Wales	30
Figure 5.6	Designated Shellfish Waters in the West of Wales SMP2 Study Area	31
Figure 6.1	Flood and Coastal Defences in the West of Wales SMP2 Study Area	37
Figure 7.1	Key Geological Designations in the West of Wales SMP2 Study Area	52
Figure 7.2	Agricultural Land Classification for the West of Wales	53
Figure 8.1	Landscape Designations in the West of Wales SMP2 Study Area	58
Figure 9.1	Internationally Important Nature Conservation Sites in the West of Wales SMP2 Study Area	68
Figure 9.2	Nationally Important Nature Conservation Sites in the West of Wales SMP2 Study Area	69
Figure 10.1	The Historic Environment in the West of Wales SMP2 Study Area	74
Figure 11.1	Community Assets in the West of Wales SMP2 Study Area	79
Figure 11.2	Transport Infrastructure in the West of Wales SMP2 Study Area	80
Figure 11.3	Critical Infrastructure in the West of Wales SMP2 Study Area	81
Figure 15.1	The Source-Pathway-Receptor Model as Applied to SEA	98

1 INTRODUCTION

1.1 Purpose

1.1.1 The Strategic Environmental Assessment (SEA) component of the Cardigan Bay and Ynys Enlli to Great Orme (hereinafter called 'West of Wales') Shoreline Management Plan review (SMP2) is being prepared by Royal Haskoning for Pembrokeshire County Council in accordance with the requirements of the European SEA Directive (2001/42/EC), as transposed into law through The Environmental Assessment of Plans and Programmes Regulations 2004 (Statutory Instrument 2004 No.1633). **Figure 1.1** presents the study area and extent of the Shoreline Management Plan which will also take into consideration the explicit integration of adjacent SMPs. With this in mind, the overall aims of this SEA are to:

- Provide for a high level of environmental protection;
- Ensure that likely significant effects on the environment of the implementation of the SMP2 are identified, described and evaluated, so that they can be taken into account before the plan is adopted; and
- Evaluate likely significant effects, some of which may be desirable (i.e. positive) taking into account the objectives and geographical scope and the SMP2 policies, so that these can inform the nature and content of the SMP2. In addition, a key aim of the SEA is to not seek alternatives in response to adverse effects, but to undertake if required achievable mitigation and or compensation which is to be owned by the plan.

1.1.2 This document constitutes a formative Scoping Report to enable informed consultation with statutory consultees, and to provide a prompt for the identification of the extent and availability of data that would be of use in the development of the Appropriate Assessment and the strategic assessment of the SMP2 policies, which will result in the production of an Environmental Report.

1.1.3 This project is being commissioned by Pembrokeshire County Council on behalf of the Cardigan Bay Coastal Group and the Ynys Enlli to Great Orme Coastal Group. The operating authorities of the Coastal Groups are Ceredigion County Council, Conwy County Borough Council, Gwynedd Council, Isle of Anglesey County Council and Pembrokeshire County Council. Other members are The Countryside Council for Wales, The Environment Agency Wales, Pembrokeshire Coast National Park Authority, Snowdonia National Park Authority, Cambria Archaeology, Gwynedd Archaeology, The Royal Commission for Ancient and Historic Monuments in Wales, CADW, the Country Land and Business Association, the Welsh Assembly Government, Network Rail and The National Trust.

1.2 SEA Framework

1.2.1 SMPs are being endorsed by The Welsh Assembly Government (WAG), who has determined that SMPs are plans that can influence development and thus should be subject to the requirements of the SEA Regulation. This Scoping Report represents the initial stage in the process of providing an SEA for the West of Wales SMP2.

1.2.2 The approach undertaken for the SEA of the West of Wales SMP2 is based on several key guidance documents, namely: Environmental Assessment of Plans and Programmes (Wales) Regulations 2004; the Office for the Deputy Prime Minister (ODPM, 2005) guidelines; the Defra Guidance on SEA (2004); and Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners (Countryside Council for Wales, English Nature, Environment Agency, Royal Society for the Protection of Birds, 2004).

1.2.3 The following present the key stages of the SEA, summarising the tasks to be undertaken at each stage.

STAGE 1

The initial stage (Screening) of the SEA shall be carried out in parallel with the SMP2. This stage shall:

- Identify plans, programmes and environmental protection objectives of relevance;
- Initial development of the SEA criteria for assessment;
- Initial consultation with key organisations and statutory consultees;
- Collection of data to establish environmental, economic and social baselines and identify relevant problems/issues; and
- Identify alternatives if any in consultation with the operating authorities.

STAGE 2 – This Report

The second (Scoping) stage involves consultation with relevant authorities and statutory consultees. This stage entails the production and review of a Scoping Report, which is presented alongside the findings of Stage 1 for comment. The Scoping Report will be revised to take account of the comments received by the statutory consultees.

The Scoping Report will be used as a basis for Stage 3.

STAGE 3

Following consultation on the Scoping Report, the objectives will be used to evaluate policy scenarios for the SMP2. This active assessment stage will also comprise the following:

- Appropriate Assessment under the Habitats Directive for the SMP2; and
- Consideration of the requirements of the Water Framework Directive which will be further developed for the WFD Assessment of the SMP2.

STAGE 4

At this stage, the suggested policy scenarios will be developed as preferred options and the SEA will be used to clearly demonstrate how environmental considerations have been addressed within the SMP process. To this end, the SEA will provide a transparent account of how environmental matters have been addressed and how this has shaped policy selection. This will culminate in the provision of the draft **Environmental Report (ER)** which will influence the final policy outcomes of the SMP2.

Following this, the draft Environmental Report is made available to the public (alongside the draft SMP2) and relevant organisations in order to enable opinions, impacts, and concerns to be identified to enable the finalisation of both the Environmental Report and SMP2.

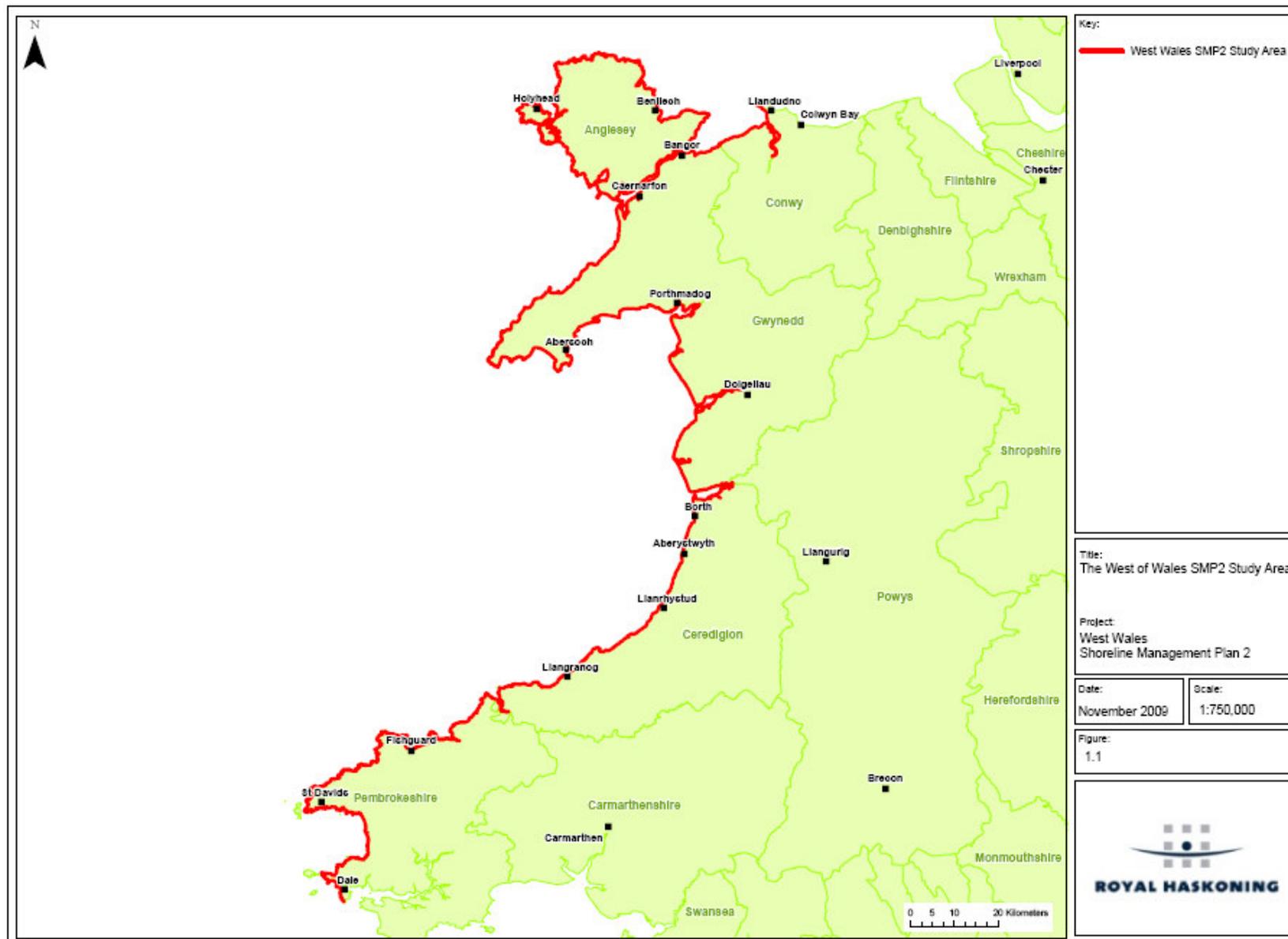
1.3 Report Structure

1.3.1 The remainder of the Scoping Report is structured as follows:

- Section 2 – Background to the West of Wales SMP2;
- Section 3 – Context to the West of Wales SMP2;
- Section 4 – Current and future risks in relation to coastal defence;
- Section 5 – Issues and constraints;
- Section 6 – Scope and SEA methodology; and
- Section 7 – The next steps.

It should be noted that key question boxes appear throughout the Scoping Report, to trigger thoughts on the SEA processes associated with the West of Wales SMP2, and to prompt structured responses.

Figure 1.1 The West of Wales SMP2 Study Area



2 BACKGROUND TO THE WEST OF WALES SMP2

2.1 Introduction to Shoreline Management Plans (SMPs)

- 2.1.1 Until relatively recently, coastal defences were constructed on an ad-hoc basis over often short lengths of coastline, the boundaries of which were usually marked by land ownership and administrative borders. This approach failed to consider the impact on other coastlines and often resulted in erosion and flood problems down drift of the defences.
- 2.1.2 In 1994 the Ministry of Agriculture, Fisheries and Food (MAFF) (now Defra) responded to the need for a more strategic approach by requiring that SMPs be in place for any operating authority seeking grant aid for coastal defence works. These SMPs are being endorsed by the Welsh Assembly Government, through which public sector expenditure on coastal defence is channelled; but are being promoted by Coast Protection Authorities who have powers relating to the management of the coast and its defences.
- 2.1.3 The SMPs set policy for the management of coastal flooding and erosion risks for a pre-determined length of coast. It is a non-statutory high level document that aims to balance those risks with natural processes and the consequences of climate change. It needs to take account of existing defences and the natural and built environments, and be compatible with adjacent coastal areas and associated plans and programmes (e.g. Local Development Plans). In detail, with respect to Local Plans and Unitary Development Plans (and Structure Plans), the SMP should strive to ensure that its recommendations are, as far as possible, broadly in accordance with relevant planning policies. However, there are two other important considerations in relation to the statutory planning process. The SMP has an important role in informing planning policy, for example by identifying areas in which future development might be restricted, limited or prevented if this assists in promoting more sustainable conditions for shoreline management along the coast as a whole. Secondly, it might be appropriate for some of the policies recommended by the SMP to be adopted by the relevant Local Plan or Unitary Development Plan.
- 2.1.4 To best achieve their objectives the SMPs divide the shoreline of England & Wales into a series of cells and sub-cells, defined by coastal type and processes such as the movement of sediment (sand and shingle) within and between the cells. These cells contain 'Process Units' which are subdivided into a number of 'Management Units'. SMPs identify one of four shoreline management policies (see **Table 2.1**) for each Management Unit, which are then appraised based on technical, environmental, social and economic factors, in line with the Government's strategy for managing floods and coastal erosion.

Table 2.1 Shoreline Management Policy Options

No active intervention (do nothing) - meaning no investment will be made in coastal defences or other operations other than for safety purposes.

Hold the existing defence line - which means the relevant operative authority will keep the line of defence as it is by maintaining existing defences or changing the standard of protection.

Advance the existing defence line - involves building new defences on the seaward side of existing defences.

Managed realignment - allows the shoreline to move backwards or forwards, with management, to control or limit movement.

- 2.1.5 The delivery of SMPs is achieved through operating authorities in coastal cells working collaboratively in regional coastal groups, but with designated “Lead Authorities” taking a project management role and making any necessary grant applications for improvement works to flood defences.

2.2 Introduction to the West of Wales SMP2

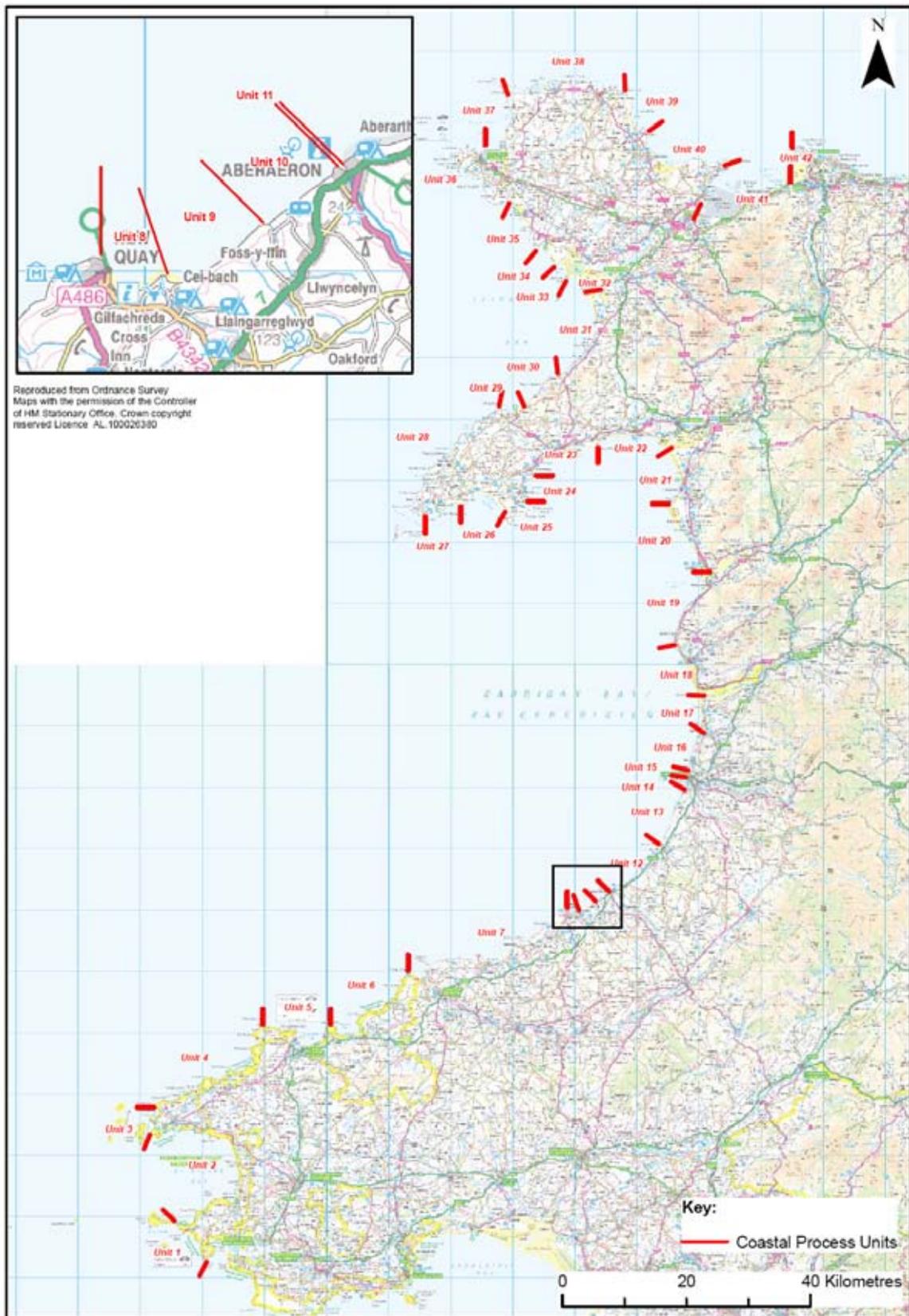
- 2.2.1 The boundaries of the West of Wales SMP2 extends from St Annes Head and Ynys Enlli to the Great Orme`s Head, including the Isle of Anglesey.

- 2.2.2 This SMP area has been divided into 42 ‘Process Units’. Including estuaries, the total length of coast within the SMP2 is approximately 460km (288 miles). The West of Wales SMP2 includes coastline and valleys within the Counties of Anglesey, Ceredigion, Conwy, Gwynedd, Pembrokeshire and Powys. The Process Units are presented in **Figure 1.2** and comprise:

- Unit 1 - St Ann’s Head to Wooltack Point
- Unit 2 - Wooltack Point to Pen Dal-aderyn
- Unit 3 - Pen Dal-aderyn to St David’s Head
- Unit 4 - St David’s Head to Strumble Head
- Unit 5 - Strumble Head to Dinas Head
- Unit 6 - Dinas Head to Cemaes Head
- Unit 7 - Cemaes Head to New Quay Head
- Unit 8 - New Quay Bay
- Unit 9 - Cei Bach to Gilfach-yr Halen
- Unit 10 - Aberaeron South Beach
- Unit 11 – Aberaeron Harbour
- Unit 12 – Aberaeron North to East Llanrhystud
- Unit 13 – Carreg Ti-pw to Allt Wen
- Unit 14 – Aberystwyth South
- Unit 15 – Aberystwyth North
- Unit 16 – Aberystwyth to Upper Borth
- Unit 17 – Borth and Ynyslas
- Unit 18 – Dyfi Estuary to Afon Dysnni
- Unit 19 – Afon Dysnni to Ro Wen
- Unit 20 – Barmouth to Mochras Point
- Unit 21 – Mochras Point to Harlech Point
- Unit 22 – Morfa Bychan to Pen-ychain
- Unit 23 – Pen-ychain to Mynydd Tir-y-cwmwd
- Unit 24 – Mynydd Tir Cwmwd to Penrhyn Ddu
- Unit 25 – Porth Ceiriad
- Unit 26 – Porth Neigwl

- Unit 27 – Porth Ysgo to Aberdaron
- Unit 28 – Pen y Cil to Carreg Ddu
- Unit 29 – Porth Dinllaen to Penrhyn Bodeillas
- Unit 30 – Penrhyn Bodeillas to Trefor
- Unit 31 – Trwyn y Tal to Fort Belan
- Unit 32 – Abermenai Point to Llanddwyn Island
- Unit 33 – Malltraeth Bay
- Unit 34 – Pen-y-Parc to Braich-lwyd
- Unit 35 – Braich-lwyd to Traeth Cymyran
- Unit 36 – Tywyn Bryn-y-bar to Holyhead Breakwater
- Unit 37 – Holyhead Breakwater to Penrhos
- Unit 38 – Trwyn y Gader to Trwyn Eilian
- Unit 39 – Trwyn Eilian to Ynys Moelfre
- Unit 40 – Ynys Moelfre to Trwyn Penmon
- Unit 41 – Bangor to Penmaen-bach Point
- Unit 42 – Conwy Estuary to Great Orme's Head

Figure 2.2 Process units for the West of Wales SMP2 Study Area



2.2.3 Three groups will drive the SMP2 project forward, each with different but important interests in the coast and its management.

The **Client Steering Group (CSG)** includes representatives of the operating authorities, including: Isle of Anglesey Council, Ceredigion County Council, Conwy County Council, Gwynedd County Council, Pembrokeshire County Council, Powys County Council, Eryri National Park Authority, Pembrokeshire National Park, the Countryside Council for Wales (CCW), the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMMW), Dyfed Archaeology, the Environment Agency Wales, the Welsh Assembly Government, HENEB, and Network Rail. The group meets regularly and are responsible for the management, development and adoption of the West of Wales SMP2.

The **Key Stakeholder Group (KSG)** will comprise representatives from all parties with an interest in the long-term management of the coastline. The group will act as a focal point for discussion and consultation at key stages of the development of the SMP with opportunities to provide direct feedback and information. Sub-groups may be required if specialist issues or areas of concern need to be discussed.

The **Elected Members Group (EMG)** comprises Elected Members from each of the operating authorities together with Environment Agency Regional Flood Defence Committees, and be supported with observer representatives from WAG and CCW. This group will be presented with analytical conclusions to enable each authority to make informed strategic policy decisions, and help them understand the preferred policies they will be asked to adopt.

In Wales, local authorities manage coastal erosion, and both they and the Environment Agency have the powers to provide coastal flood defences.

Overall policy responsibility for flood and coastal erosion management rests with WAG. It aims to achieve similar outcomes to England, but without making any changes to existing arrangements for managing the coast. WAG provides all the funding for managing flooding and grants aids capital works for coastal erosion.

2.3 Aims and Objectives of the West of Wales SMP2

Requirements of the SMP2

2.3.1 The first round of SMPs for the West of Wales area was completed in 2002 and carried out in accordance with MAFF (now Defra) Flood Management Division's high-level policy. Previously the Pembrokeshire, Central Cardigan Bay, North Cardigan, Ynys Enlli to Great Orne SMPs covered the West of Wales SMP2 study area. At the time of the original SMP studies, current guidance suggested that SMPs be reviewed and, if necessary, updated approximately every five years. It is now seven years since the completion of the 2002 SMPs that previously covered the study area.

2.3.2 In March 2005, Defra issued new High Level Targets (HLT) for Flood and Coastal Erosion Risk Management. Target 3 requires designated Lead Authorities to produce second generation SMPs in accordance with revised Defra guidance. HLT3 requires the revised plans to be complete by March 2010.

- 2.3.3 First generation SMPs were developed on the information available at the time. During the preparation of many first round SMPs nationally, it became apparent that the quality and extent of information available was deficient in certain aspects, particularly informing how the coast would evolve.
- 2.3.4 Since the completion of the 2002 original SMPs for West of Wales, there is now significant new information resulting from strategic studies, coastal monitoring, coastal defence schemes, climate change and changes in environmental designations etc. Furthermore, there have been significant nationally focused studies such as Future Coast and new indicative coastal flood mapping that need to be taken into consideration. Defra has also published updated guidance on how to produce SMPs (Defra, 2006a, 2006b).
- 2.3.5 It is, therefore, appropriate that the previous SMPs that covered the West of Wales SMP2 study area are reviewed and (if necessary) revised at this time to take account of these intervening studies, to consider the long-term sustainability of the shoreline and to determine clear policies based on both the original data used in developing the first generation SMPs and the updated data and scientific knowledge. This will then ensure that the SMP for West of Wales as a whole is consistent with other second-generation SMPs, which are being prepared around the Welsh coastline.
- 2.3.6 The objectives of the West of Wales SMP2, which are based on the Shoreline Management Plan Guidance Volume 1: Aims and Requirements (Defra, 2006a), will aim to:
- Set out risks from flooding and erosion to people and developed, historic and natural environment within the SMP2 study area;
 - Identify opportunities to maintain and improve the environment by managing the risks from floods and coastal erosion;
 - Identify the preferred policies for managing risks from floods and erosion over the next century;
 - Identify the consequences of putting the preferred policies into practice;
 - Set out procedures for monitoring how effective these policies are;
 - Inform others so that future land use, planning and development of the shoreline takes account of the risk and the preferred policies;
 - Discourage inappropriate development in areas where the flood and erosion risks are high; and
 - Meet international and national nature conservation legislation and aim to achieve the biodiversity objectives.
- 2.3.7 In addition, the Welsh Assembly Government identified further interpretation of the aims of SMP2, which are to:
- Encouraging the provision of adequate and cost-effective flood warning systems;
 - Encouraging the provision of adequate, technically, environmentally and economically sound and sustainable flood and coastal defence measures;
 - Discouraging inappropriate development in areas at risk from flooding or coastal erosion; and
 - Amend the guidance given in the Flood and Coastal Defence Project Appraisal Guidance Volume 3 - Economic Appraisal to reflect the fact that justification for the public investment should be based on consideration of all option benefits, both

quantifiable and unquantifiable, with particular regard to the impacts on people, which can and must be taken into account in the appraisal of options and selection process.

2.3.8 Consequently, the SEA is intended to inform the SMP2 process of the social and environmental constraints, issues and effects of the shoreline management policies, and will assess these policies to provide clarity and transparency of the policy selection process.

Stages in the SMP2

2.3.9 The main stages in the review of the West of Wales SMP2 are as follows:

- Stage 1: Scope the SMP;
- Stage 2: Assistance to support policy development;
- Stage 3: Policy development;
- Stage 4: Public examination;
- Stage 5: Finalise plan; and
- Stage 6: Plan dissemination.

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3 CONTEXT TO THE WEST OF WALES SMP2

3.1 Introduction

3.1.1 This section presents the existing plans, programmes and policies which have an influence on or link with the Shoreline Management Plan or could be influenced by its developed actions and policies. In addition, the second part of the section presents the baseline environment available at this stage of the SEA process. Additional information is being sought and where possible consultees are requested to identify any outstanding information that may be relevant to the SEA and the SMP2 and its effect on the whole environment.

3.2 Relationship with Other Plans, Policies and Programmes

3.2.1 In order to determine the legislative, strategic, planning and policy context within which the SMP2 is being developed, all the policies and local planning legislation needs to be identified and considered. The review of these policies, plans and programmes is also essential in ensuring that the SMP2 achieves an integrated and sustainable approach to coastal management. As such, there is significant overlap with a number of existing and on-going plans and strategies at various scales including the County Council scale which for this SMP2 covers Isle of Anglesey, Conwy, Gwynedd, Ceredigion, Pembrokeshire and Powys. The potential overlapping plans relevant to this SEA and SMP2 are provided below. Full details of selected plans (e.g. their objectives) are provided in **Appendix A**.

3.2.2 European Plans (Frameworks):

- Bonn Convention on the Conservation of Migratory Species of Wild Animals 1979;
- Bern Convention on the Conservation of European Wildlife and Natural Habitats 1979;
- Ramsar Convention on wetlands of International Importance (1971);
- The Freshwater Directive 78/659/EEC;
- EU Directive 2007/60/ec on the Assessment and Management of Flood Risks;
- Kyoto Protocol on Climate Change 1997;
- Adapting to Climate Change in Europe-Options for EU Action 2007;
- EU Second European Climate Change Programme 2005;
- Charter for the Protection and Management of Underwater Cultural Heritage 1996;
- The European Landscape Convention;
- Charter for the Protection and Management of Archaeological Heritage;
- The European Landscape Convention;
- Charter on the Protection and Management of Underwater Cultural Heritage 1996;
- UNESCO Convention concerning the Protection of the World Cultural and National Heritage 1972;
- European Water Framework Directive: River Basin Classification studies;
- European SEA Directive;
- European Birds Directive;
- EU Sustainable Development Strategy (EU, 2006);
- EU Thematic strategy for Protection and Conservation of the Marine Environment (adopted 24/10/2005);

- EU Biodiversity Strategy (EU, 1998);
- European Spatial Development Perspective (EU, 1999);
- Environmental Liability Directive 2004/35/EC;
- Climate Change: The UK Programme 2001;
- Planning for Climate Change 2006 Consultation Draft;
- The Stern Report 2007;
- Earth Science in Great Britain – a strategy 1990;
- Wildlife and Countryside Act 1981;
- UK Marine Bill Consultation 2006;
- Water Resource Management Plans;
- Bathing Water Quality Directive; and
- Habitats Directive.

3.2.3 National and Regional Plans:

- Conservation of Dynamic Coasts: A Framework for Managing Natura 2000;
- Department of Health: Be Active, Be Healthy - A plan for Getting the Nation Moving, 2009;
- Landscape Character Assessment: Guidance for England and Scotland. Topic Paper 9: Climate change and natural forces - the consequences for landscape character;
- The draft Marine Bill 2008;
- The Countryside and Rights of Way (CROW) Act 2000;
- The Natural Environment and Communities Act (NERC Act);
- UK Biodiversity Action Plan (UK BAP, Defra 1994);
- The UK's shared framework for sustainable development (Defra, 2005);
- The Register of Welsh Historic Landscapes (CCW 1995);
- Climate Change Wales – Learning to Live Differently 2001;
- TAN 5 Nature Conservation and Planning;
- TAN 15 Development and Flood Risk;
- TAN 14 Coastal Planning;
- Wales Audit Office report Coastal Erosion and Tidal Flooding Risks in Wales;
- Environment Strategy for Wales and its Action Plan (Welsh Assembly Government, 2006);
- The National Waste Strategy for Wales (Welsh Assembly Government, 2002);
- The State of the Welsh Environment (Environment Agency Wales, 2003);
- People, Places, Futures: Wales Spatial Plan (Welsh Assembly Government, 2004);
- People, Places, Futures: Wales Spatial Plan Update (Welsh Assembly Government, 2008);
- One Wales Delivery Plan 2007 - 2011 (Welsh Assembly Government, 2007);
- The Sustainable Development Action Plan 2004 -2007 (Welsh Assembly Government, 2004);
- Wise About Waste: The National Waste Strategy for Wales (2002);

- The Wales Transport Strategy (Welsh Assembly Government, 2008);
- Scheme for Sustainable Development (National Assembly for Wales);
- Draft Rural Development Plan (National Assembly for Wales, 2006);
- Wales Biodiversity Framework for Wales 2007;
- Achieving Our Potential: A Tourism Strategy for Wales 2000;
- Achieving Our Potential: A Tourism Strategy for Wales Mid Term Review 2006;
- Strategic Framework for Economic Development Consultation Document (Welsh Assembly Government, 2005);
- Wales Fisheries Strategy (Welsh Assembly Government, 2008);
- Strategy for Sport & Physical Activity (Welsh Assembly Government, 2005);
- Climate Change Strategy Consultation Document (Welsh Assembly Government, 2009);
- Guide to Best Practice in Seascape Assessment (2001);
- Shoreline Management Plan Guidance (2006);
- Flooding in England and Wales (2009);
- Flood and Coastal Defence Appraisal Guidance (2006);
- Coastal Erosion and Tidal Flooding Risks in Wales (2009); and
- Draft River Basin Management Plan - The Western Wales River Basin District (Environment Agency, 2008).

3.2.4 County and District/Borough Plans:

- Isle of Anglesey Local Transport Plan (Isle of Anglesey County Council, 2000);
- Anglesey Life (Isle of Anglesey County Council 2007);
- Anglesey Municipal Waste Strategy (Isle of Anglesey County Council, 2004);
- ~~The Isle of Anglesey Local Development Plan (LDP) 2006–2021 Written Statement 2008 (Isle of Anglesey County Council);~~
- Anglesey AONB Management Plan Review (Land Use Consultants, 2009);
- The Ynys Môn (Anglesey) Catchment Abstraction Management Strategy Consultation Document (Environment Agency, 2006);
- Ceredigion County Council Preferred Strategy 2007 - 2022 Local Development Plan Consultation;
- Ceredigion Local Development Strategy And Appendices (Ceredigion Economic Regeneration Partnership, 2007);
- Ceredigion 2020 Ceredigion Community Strategy (Ceredigion County Council);
- Ceredigion Local Biodiversity Action Plan (Ceredigion Biodiversity Partnership, 2002);
- The North Ceredigion Catchment Abstraction Management Strategy (Environment Agency, 2008);
- Waste Management Strategy For Ceredigion (Ceredigion County Council, 2002);
- Conwy Local Development Plan Preferred Strategy (Conwy County Borough Council, 2006);
- Conwy Municipal Waste Strategy (Conwy County Borough Council, 2006);

- A Community Strategy For Conwy 2004 -2014 (Conwy County Borough Council, 2004);
- Conwy Local Biodiversity Action Plan (Conwy County Borough Council);
- Conwy Catchment Abstraction Management Strategy (Environment Agency, 2004);
- Conwy Salmon And Sea Trout Action Plan Draft Document (Environment Agency, 2000);
- Gwynedd Unitary Development Plan 2001 - 2016 (Gwynedd Council, 2001);
- Gwynedd Draft Waste Strategy (Gwynedd Council, 2005);
- Gwynedd Council Environmental Strategy (Gwynedd Council);
- Gwynedd Local Biodiversity Action Plan (Gwynedd Council);
- Gwynedd Together Gwynedd Community Strategy (Gwynedd Council);
- Gwynedd and Isle of Anglesey Community Transport Strategy (CTA UK, 2007);
- Pembrokeshire Local Transport Plan (Pembrokeshire County Council, 2000);
- Pembrokeshire Local Development Plan 2011-2021 Preferred Strategy Consultation Document (Pembrokeshire County Council, 2009);
- A Community Plan For Pembrokeshire 2003/08 (Pembrokeshire County Council, 2003);
- Municipal Waste Management Strategy for Pembrokeshire (SLR Consulting Limited, 2004);
- Anglesey Local Biodiversity Action Plan;
- Pembrokeshire Local Biodiversity Action Plan (Pembrokeshire Biodiversity Partnership, 2000);
- Powys Community Strategy 2008 - 2011 (Powys County Council, 2008); and
- First round SMPs for Pembrokeshire, Central Cardigan Bay, North Cardigan and Ynys Enlli.

It should be noted that the Isle of Anglesey Local Development Plan (LDP) 2006 - 2021 is no longer so valid, as the LDP process has had to go back some way and is currently likely to be merged to become part of one joint LDP with Gwynedd.

3.2.5 The available plans and strategies, identified above, have been reviewed in order to draw out the key sustainability and environmental issues and influences that will be relevant to the West of Wales SMP2 and this SEA. **Appendix A** presents a tabulated summary of selected key plans and strategies that have been reviewed.

Q 3.1 Are there any other strategic documents you consider should be reviewed for the SEA?

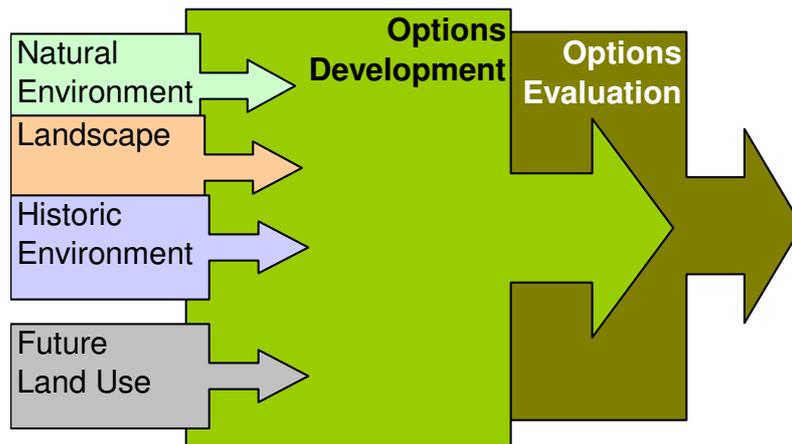
3.3 Baseline Environment

- 3.3.1 Wales is a mainly mountainous country with relatively small areas of coastal plain and lowland valleys, covering 2.078 Million (M) hectares (around 20,000km²), and has a coastline of approximately 1,280km in total length. The Welsh coastline is diverse in character from urban seaside resorts, working harbours and ferry ports, to small rural communities and isolated stretches of coast. The coastline hosts spectacular unspoilt rugged scenery with tall sea cliffs, prominent headlands, small bays with sandy or shingle beaches, caves, rock stacks and areas of prominent sand dunes such as at Freshwater West. Much of Wales' coastline is designated as Heritage Coast and is of significant cultural, historic and geological value. There are several islands off the West of Wales coastline, the largest being Anglesey in the northwest.
- 3.3.2 The overall population of Wales stands at approximately 2.95 million people, around 400,000 people live in the local authority areas bordering the West of Wales coastline.
- 3.3.3 The Welsh economy is dominated by the service sector followed by the manufacturing sector while agriculture, forestry, and fishing contribute a smaller amount. With its mountainous landscape and numerous sandy beaches, Wales is a significant tourist destination. The North Wales marine and coastal economy is predominantly, though not exclusively tourism based. In West Wales, tourism accounts for over a third of direct coast and marine employment, and in South East Wales it accounts for over half of coastal and marine sector direct jobs.
- 3.3.4 Many of the small coastal settlements along the West of Wales coastline were often established as fishing ports or commercial harbours, and each has its own distinctive historical and contemporary cultural identity. In some of these areas, especially in the northwest, Welsh is still the working language and is widely used.
- 3.3.5 Wales' coastal environment is very high quality, which is reflected in the large number of designations including Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Special Sites of Scientific Interest (SSSIs) and a Marine Nature Reserve, which protect a range of habitats and species. Birds account for the designation of SPAs, and the coastline includes many key species such as choughs, puffins and also the world's largest population of Manx shearwaters (Skomer Island). The coastline is renowned for its spectacular geology, which has provided the field evidence for understanding the rocks of the Cambrian, Ordovician, Silurian and Carboniferous Periods in geological time, and its features are of geological importance internationally, nationally and to the region.
- 3.3.6 The following sections (**Section 4 to 11**) provide details of the natural and built environment in terms of the overall importance and sensitivity of the assets within the SMP2 study area. These are based on the requirements of the Thematic Review, which is described below. It should be noted that for the undertaking of the thematic review we have used a GIS which contains information on sites within 1km of the coast (and estuaries). However, based on previous SMPs we have found it beneficial and time-effective to include more information at this stage for the baseline environment of the Scoping Reports which can then be refined for the SEA Environmental Report based on consultation feedback.

Thematic Review

- 3.3.7 The following sections provide a thematic review that establishes the key features along the coast and describes why these features collectively summarise the value of this area of coast. The values identified relate to the natural features of the coast, the landscape and character of the area and the historic structures and spatial features that define the overall character of West of Wales coast.

Thematic Basis of Options Development



- 3.3.8 The description of the coast in this way provides the basis for management that has regard to the particular character of the area, thereby providing a focus to ensure that a holistic approach is taken which recognises why this particular section of coast is so important to local stakeholders. Additionally, the likely future land use patterns in the study area have been evaluated based on a consideration of the relevant strategic and land use plan coverage including those currently in development. The provision of this information critically underpins the development of policy options for the coast and crucially informs a considered approach to options evaluation within the SMP2 process, as well as informing the Strategic Environmental Assessment (SEA).
- 3.3.9 The tables listing all natural and built assets within the West of Wales SMP2 study area, along with their sensitivity and value, are presented in **Appendix B**.

Q 3.2 In the following Sections (4 to 11), is there any environmental information missing that could relate to a significant negative or positive impact?

4 CURRENT AND FUTURE LAND USE

4.1 Introduction

4.1.1 This section provides an account of the urban environment in terms of existing land uses and patterns of development. The relevant regional strategies and local land use plans have been used to provide a structured basis for this description. With the introduction of Regional Spatial Strategies and Local Development Frameworks the planning system is currently undergoing reformation and the majority of land use plans are either under review or replacement. The study area has therefore been broken down by local authority boundary with an initial description offered from a regional perspective. Given that the use of land is determined by the statutory planning process, statutory plans have been the main focus of this study. Finally, the emerging suite of land use plans for the area is used to provide and account of anticipated future land use in the area.

4.2 Overview

4.2.1 This section presents an overview of the coastline from St Annes Head and Ynys Enlli to the Great Orme`s Head regarding population dynamics and land use patterns.

Population Dynamics

4.2.2 The main urban areas along the West of Wales SMP2 coastline are presented in **Table 4.1** and include cities (Bangor and St Davids) as well as smaller coastal towns and seaside resorts.

Table 4.1 Cities (in bold), Towns and Seaside Resorts in the West of Wales SMP2 Study Area

Towns / cities and seaside resorts	Principal area	Population (approx)
Aberaeron	Ceredigion	1,520
Aberdyfi	Gwynedd	-
Abersoch	Gwynedd	-
Aberystwyth	Ceredigion	16,928 (+8841)*
Amlwch	Anglesey	3,438
Bangor	Gwynedd	21,735
Barmouth	Gwynedd	2230
Beaumaris	Anglesey	< 2,040
Benllech	Anglesey	2,340
Borth	Ceredigion	-
Caernarfon	Gwynedd	9,611
Cardigan	Ceredigion	4,203
Clarach Bay	Ceredigion	-
Conwy	Conwy	3,847
Criccieth	Gwynedd	1,826
Deganwy	Conwy	3,700
Fairbourne	Gwynedd	-
Fishguard	Pembrokeshire	3,300
Goodwick	Pembrokeshire	-
Harlech	Gwynedd	1,264

Towns / cities and seaside resorts	Principal area	Population (approx)
Holyhead	Anglesey	13,580
Laugharne	Carmarthenshire	-
Llandanwg	Gwynedd	-
Llanddona	Anglesey	-
Llandudno	Conwy	20,090
Llanfairfechan	Conwy	3,755
Llangrannog	Ceredigion	772
Menai Bridge	Anglesey	3,850
Mwnt	Ceredigion	-
Nefyn	Gwynedd	2,550
Newport	Pembrokeshire	1,122
New Quay	Ceredigion	-
Pendine	Carmarthenshire	-
Penmaenmawr	Conwy	2,500
Porthgain	Pembrokeshire	-
Porthmadog	Gwynedd	4,187
Pwllheli	Gwynedd	3,861
Saundersfoot	Pembrokeshire	-
Shell Island (Wales)	Gwynedd	-
St David's	Pembrokeshire	1,797
Trearddur	Anglesey	25,896
Tywyn	Gwynedd	2,864
Ynyslas	Ceredigion	-

* Influx of students

- 4.2.3 The population trends over the last decade have seen a decrease in younger people particularly between the ages of 25-34 and an increase in the numbers of people ages 65 and over (WAG, 2009). The number of people migration into Wales from overseas doubles those leaving to overseas destinations. The net-inflow of international migrants into Wales increased from 1.0 thousand in 2005 to 8.5 thousand in 2007 (WAG, 2009). England accounts for the majority of cross boarder migration movements to/from Wales, while North Wales regions experience the largest average number of net migrants, although the Isle of Anglesey had the lowest average outflow rate. Local authorities with high student populations such as Ceredigion tend to have the highest volumes of migration, experiencing the highest inflow and outflow rates in Mid Wales (**Table 4.1**). Of the South West regions Pembrokeshire had the highest inflow rates (WAG, 2009).
- 4.2.4 In general, population health in Wales is poorer than in England, but health in many parts of the West of Wales is substantially worse than in the rest of Wales. West of Wales generally exhibits mortality rates below the Welsh average and reflects in particular higher incidences of coronary heart disease and cancer. Some communities in the of West of Wales experience life expectation five years or more less than in more advantaged parts of Wales, and an excess premature mortality which rose from 48% to 69% over the decade from 1981 to 1991 (Digest of Welsh Local Area Statistics, 1998).

4.2.5 Measures of health and deprivation show that mortality ratios in the West of Wales experience significantly worse physical and mental health than elsewhere in Wales. Levels of both self-reported sickness and dependence on Invalidity and Incapacity Benefits have risen substantially since the 1980s, reflecting wider UK trends. There is a considerable body of evidence that links the determinants of health with low incomes and with other features of social exclusion. The higher mortality ratios and levels of limiting long-term illness therefore represent the consequences of low standards of living and of social exclusion. They are also reflective of factors which contribute to low levels of economic activity and income.

Land use

4.2.6 The patterns in land use in the West of Wales are presented in **Figure 4.1**, in which it can be seen that the primary agricultural land use is predominantly grassland. In 2004, land use in Wales consisted 62% permanent grass (1,010,000 ha), 23% rough grazing (383,000 ha), 11% arable land (177,000 ha) and 4% woodland and other lands including set-aside (64,000 ha). The Common Agricultural Policy reform may lead to a substantial reduction in arable and livestock production and a shift in agricultural land use in Wales. Recent government policy on renewable energy, such as biomass crops scheme, is anticipated to change agricultural land use and hence the biodiversity of the rural landscape by incorporating short rotation coppice (SRC) and perennial biomass grass crops.

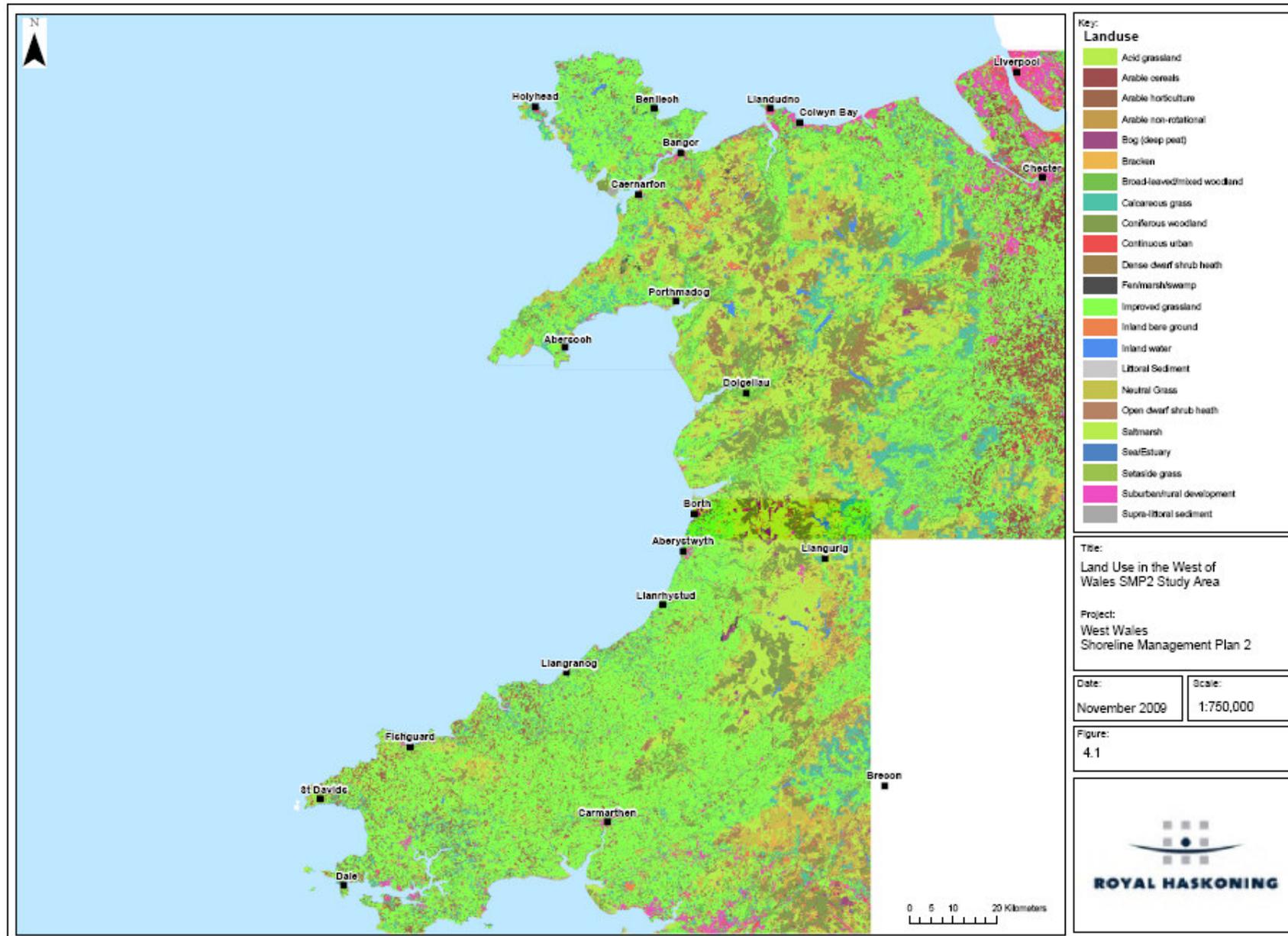
4.2.7 The proportion of land of different types varies considerably, with the proportion of severely disadvantaged land being particularly high in Gwynedd and Conwy. Dairy farming is dominant in such areas as Pembrokeshire, whilst in the north to a lesser extent beef farming (e.g. Gwynedd, Conwy) dominates. Sheep farming is generally located in the uplands which are less suited to other kinds of livestock.

4.2.8 Agricultural intensification has had a negative environmental effect on the quality of the Welsh uplands. In many areas the landscape has been damaged and is still being threatened by agricultural changes such as the removal of traditional field boundaries. A survey by the Institute of Terrestrial Ecology showed a 10% net loss of hedgerows in Wales in the period 1990-93. This followed on from a 25% loss of hedges in Wales in the period 1984-90. Evidence suggests that 70% of this loss is due to poor management, and 30% due to actual removal of hedges.

4.2.9 In lowland areas, semi-natural grasslands of all types have suffered major declines since the 1930s and species threatened as a result include the greenwinged orchid and the marsh fritillary butterfly.

4.2.10 Forestry and woodland represents another land use of the West of Wales. There are approximately 269,000 hectares of woodland in Wales (13% of the total area) and 94% of that is considered to be productive. However, the condition of woodland is often unfavourable due to over-grazing by domestic stock and wild deer, and infestation with dense rhododendron.

Figure 4.1 Land Use in the West of Wales SMP2 Study Area



5 THE WATER ENVIRONMENT

5.1 Introduction

5.1.1 This section provides an account of the water environment in terms of bathing water quality, shellfish water quality, estuarine and coastal water quality, river water quality, water pollution, and resource use in the coastal environment.

5.2 Overview

Bathing and Shellfish Waters

5.2.1 Bathing water quality is assessed by standards listed in the EC Bathing Waters Directive (76/160/EEC). The Directive was adopted by the Council of European Communities in 1975 and transposed into law for England and Wales to form the Bathing Waters (Classification) Regulations 1991. The Directive is concerned with the quality of bathing waters for the purposes of protecting public health and requires monitoring of microbiological parameters and a small number of physical parameters (e.g. visible oil). The Directive also sets the minimum frequency at which bathing waters should be sampled.

5.2.2 There are currently 80 European Commission (EC) designated bathing waters in Wales which are monitored between 1st May and 30th September each year. There are 62 identified bathing water sites in the study area in 2008 (see **Figure 5.1**). Of these bathing waters identified, 48 (77.4%) met guideline values, 13 (21%) imperative values and only 1 (1.6%) failed. The only bathing water that failed the mandatory quality standard was Llandanwg, in Gwynedd (**Table 5.1**). The very poor weather conditions over the summer suggest that the probable cause was pollution caused by surface water runoff from farmland and urban areas.

Table 5.1 2008 Bathing Waters Failing to Meet Mandatory (imperative) Standard in West of Wales

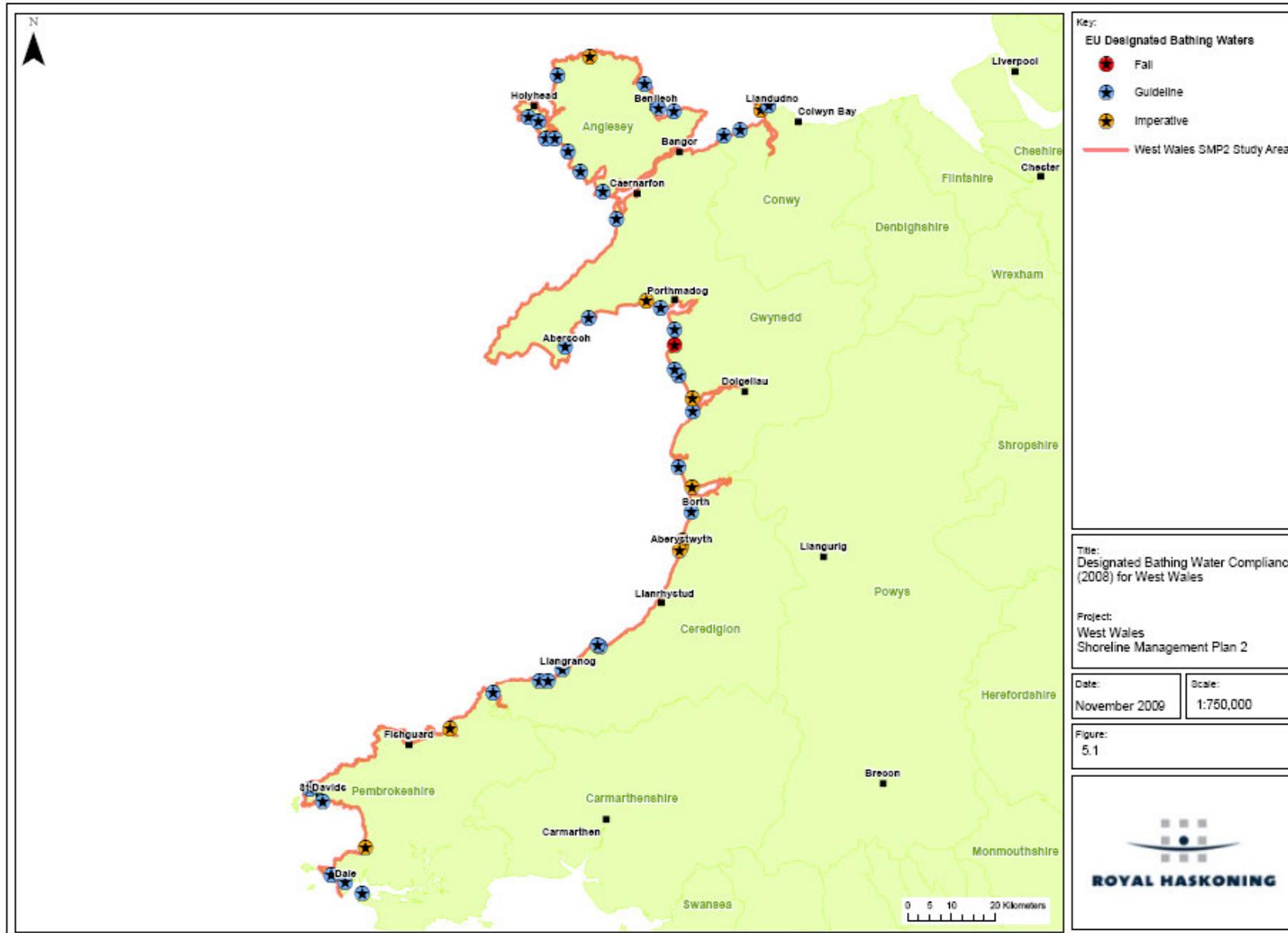
Council	Bathing water name
Cyngor Gwynedd Council	Llandanwg

5.2.3 The aim of the EC Shellfish Waters Directive is to protect or improve shellfish waters in order to support shellfish life and growth, therefore contributing to the high quality of shellfish products directly edible by man. It sets physical, chemical and microbiological water quality requirements that designated shellfish waters must either comply with ('mandatory' standards) or endeavour to meet ('guideline' standards).

5.2.4 The Directive is designed to protect the aquatic habitat of bivalve and gastropod molluscs, including oysters, mussels, cockles, scallops and clams. It does not cover shellfish crustaceans such as crabs, crayfish and lobsters.

5.2.5 The Directive will be repealed in 2013 by the EC Water Framework Directive. When this occurs, the Water Framework Directive must provide at least the same level of protection to shellfish waters (which the WFD classifies as protected areas) as the Shellfish Waters Directive does.

Figure 5.1 Designated Bathing Water Compliance (2008) for West of Wales



5.2.6 Of the seventeen designated shellfish water areas within the West of Wales SMP2 area (see **Table 5.2** and **Figure 5.6**), the majority were classified as Class B in 2008/2009, in which shellfish must undergo moderate purification by relaying in cleaner water for varying lengths of time before marketing (FSA, 2008).

Table 5.2 Results of Monitoring for Ecologically Significant Species (Shellfish Waters) – Based on 2007 Data

Shellfish water name	Compliance status (guideline pass, imperative pass, fail)	Species present
Conwy	Guideline fail / Imperative pass	Mussels (<i>Mytilus ssp</i>)
Dwyrdd	Guideline fail / Imperative pass	Cockles (<i>Cardium edule</i>) Mussels (<i>Mytilus ssp</i>)
Dyfi	Guideline fail / Imperative pass	Cockles (<i>Cardium edule</i>) Mussels (<i>Mytilus ssp</i>)
Glaslyn	Guideline fail / Imperative pass	Cockles (<i>Cardium edule</i>) Mussels (<i>Mytilus ssp</i>).
Llanddwyn Bay	Guideline fail / Imperative pass	Mussels (<i>Mytilus ssp</i>)
Llandudno	Guideline fail / Imperative fail	Mussels (<i>Mytilus ssp</i>)
Malltraeth Sands	Guideline pass / Imperative pass	Cockles (<i>Cardium edule</i>) Mussels (<i>Mytilus edulis</i>)
Mawddach	Guideline fail / Imperative pass	Cockles (<i>Cardium edule</i>) Mussels (<i>Mytilus ssp</i>).
Menai Strait (East)	Guideline pass / Imperative pass	Cockles (<i>Cardium edule</i>) Mussels (<i>Mytilus ssp</i>)
Menai Strait (Foryd Bay)	Guideline pass / Imperative pass	Mussels (<i>Mytilus edulis</i>)
Menai Strait (West)	Guideline pass / Imperative pass	Mussels (<i>Mytilus ssp</i>) Cockles (<i>Cardium edule</i>)
Red Wharfe Bay	Guideline fail / Imperative fail	Cockles (<i>Cardium edule</i>)
Taf	Guideline fail / Imperative pass	Cockles (<i>Cardium edule</i>).

5.2.7 Of the designed shellfish waters within the study area only two (Llandudno and Red Wharfe Bay) failed to pass the imperative mandatory standards.

5.2.8 For all the shellfish waters within the study area the Environment Agency Wales have written Shellfish Waters Directive Pollution Reduction Plans. This programme outlines the state of the catchment with respect to the Shellfish Waters Directive standards. It examines and explains the causes of failures to meet those standards.

5.2.9 During the last 5 years the Llandudno shellfish water has been compliant with all mandatory standards, except Zinc in 2007. It has also achieved all guideline standards except for salinity and dissolved oxygen in 2007 and faecal coliforms in 2004 and 2005. The reason for the one off zinc failure is unknown. The Ganol Sewage Treatment Works are considered the potential source for guideline failures and remedial action is underway to upgrade the treatment process.

5.2.10 During the past 5 years (2003-2007) Red Wharf Bay Shellfish Water has complied with all mandatory standards apart from one-off mandatory failures for Mercury in 2004 and Zinc in 2007. During the past 5 years, the Red Wharf Bay Shellfish Water passed the guideline standard for dissolved oxygen and salinity in all years and for Faecal Coliforms in 2003.

Surface and Ground Water Quality

5.2.11 The European Water Framework Directive came into force in December 2000 and became part of UK law in December 2003. It gives the Environment Agency an opportunity to plan and deliver a better water environment, focussing on ecology.

5.2.12 By managing water in 11 River Basin Districts, the Water Framework Directive aims to:

- Improve the ecological health of inland and coastal waters and prevent further deterioration, especially by protecting against diffuse pollution in urban and rural areas through better land management;
- Drive wiser, sustainable use of water as a natural resource;
- Create better habitats for wildlife that lives in and around water, for example by improving the chemical quality of water;
- Reduce or phase out discharges, emissions and losses of priority substances and priority hazardous substances;
- Reduce the pollution of groundwater; and
- Contribute to limiting the effects of floods and droughts.

5.2.13 Under the Water Framework Directive (WFD), good water quality status of rivers, lakes, groundwater and coasts is to be achieved for river basin districts in the UK by 2015. For each river basin district a River Basin Management Plan (RBMP) must be developed, which will form the achievement of water quality protection and improvement (Articles 11 and 13). The improvement of water quality of rivers will thus have a major impact on the quality of coastal waters for example, Bathing and Shellfish Waters.

5.2.14 The SMP2 study area lies within the Western Wales River Basin District which comprises 27 estuarine and 24 coastal water bodies. Consultation on the draft River Basin Management Plan (RBMP) is currently being undertaken by the Environment Agency. The draft RBMP states that the waterbodies are progressing towards good ecological status and good ecological potential (Environment Agency, 2008).

5.2.15 Surface water bodies are grouped into different types according to their physical and chemical characteristics. The main estuaries and coastal water body types found in West of Wales are classified according to **Table 5.3** and **Figures 5.2 – 5.3**.

Table 5.3 Estuary Classifications

Estuary	Classification
Conwy	Partly mixed, macro
Alaw	Mixed, meso, extensive intertidal
Cefni	Mixed, meso, extensive intertidal
Ffraw	Mixed, meso, extensive intertidal
Foryd Bay	Mixed, meso, extensive intertidal

Estuary	Classification
Braint	Mixed, meso, extensive intertidal
Seiont	Mixed, meso, extensive intertidal
Erch	Mixed, meso, extensive intertidal
Dwyfor	Partly mixed, meso
Glaslyn	Partly mixed, meso
Atro	Mixed, meso, extensive intertidal
Mawddach	Partly mixed, meso
Dysynni	Partly mixed, meso
Dyfi & Leri	Partly mixed, meso
Ystwyth / Rheidol	Partly mixed, meso
Teifi	Partly mixed, meso
Nyfer	Partly mixed, meso
Gwaun	Mixed, meso, extensive intertidal
Solfach	Mixed, meso, extensive intertidal

5.2.16 The chemical water status of the West of Wales coastal areas is generally good with only Milford Haven Estuary failing to achieve good status **Figure 5.4**. Many of the coastal areas including those of Cardigan Bay and the estuaries of Anglesey do not require assessment. The ecological status of the West of Wales coastline has been assessed as good (see **Figure 5.5**), with many of the estuaries and waters of the Menai Straits do not require assessment.

Diffuse Pollution

5.2.17 Diffuse pollution to groundwater, surface water and coastal water comes from many sources, which are generally very small individual sources that occur across a large area. Thus they are seen to individually not affect water quality but collectively they can have significant effects on water quality and subsequent indirect to biodiversity, and human beings. Diffuse pollution can arise from historic and present day land uses and activities, in both agricultural and urban areas.

Resource Use/Recreation

5.2.18 The recreational use and amenity value of the West of Wales coastline are two of its main features. The Welsh coast is a vital resource to the tourism industry in Wales (especially in the north and south west), and accounts for a quarter of total tourism spending in Wales (WAG, 2007). UK visitors to the Welsh coast undertake a range of activities linked to the seaside (**Table 5.4**). The coastline also plays an important role in maintaining a good quality of life for local residents. The high quality of beaches, both in terms of accessibility and water quality make bathing water a significant contribution to tourism-generated revenue. Kayaking, windsurfing, rowing, scuba diving, sailing and surfing are among the other important water based recreational activities along the coastline.

5.2.19

Many other aspects of Wales' economy are based on its marine resources. Milford Haven is the largest port in Wales, handling mostly oil and gas products but with some ferry traffic to Ireland and leisure and fishing facilities. Holyhead is the largest ferry port in Wales, transporting both passengers and freight units. The ports of Milford Haven and Holyhead are also the centres of commercial sea fishing in Wales. There is inshore fishing around the Welsh coast for a wide range of species including sea bass, crabs, scallops, lobster and whelks and also many areas that are important for shellfish populations such as the Menai Straits which has the UK's largest cultivated mussel fishery. There are also strong drivers for renewable energy production using wind power, tidal and wave energy. Many of the areas along the West of Wales coastline including Cardigan Bay are important Ministry of Defence (MoD) sites.

Table 5.4 Activities pursued by UK visitors whilst on holiday at the Welsh seaside

Activity	%
Shopping	65%
Walking over 2 miles	38%
Visiting Heritage sites	35%
Swimming	34%
Visiting museums, galleries	19%
Nature study	18%
Watching performing arts	13%
Watersports	9%
Cycling	9%
Sea angling	6%
Petrocentric	5%
Golf	4%

Source: Welsh Assembly Government, 2007.

Figure 5.2 Estuarine Water Body Types in West of Wales

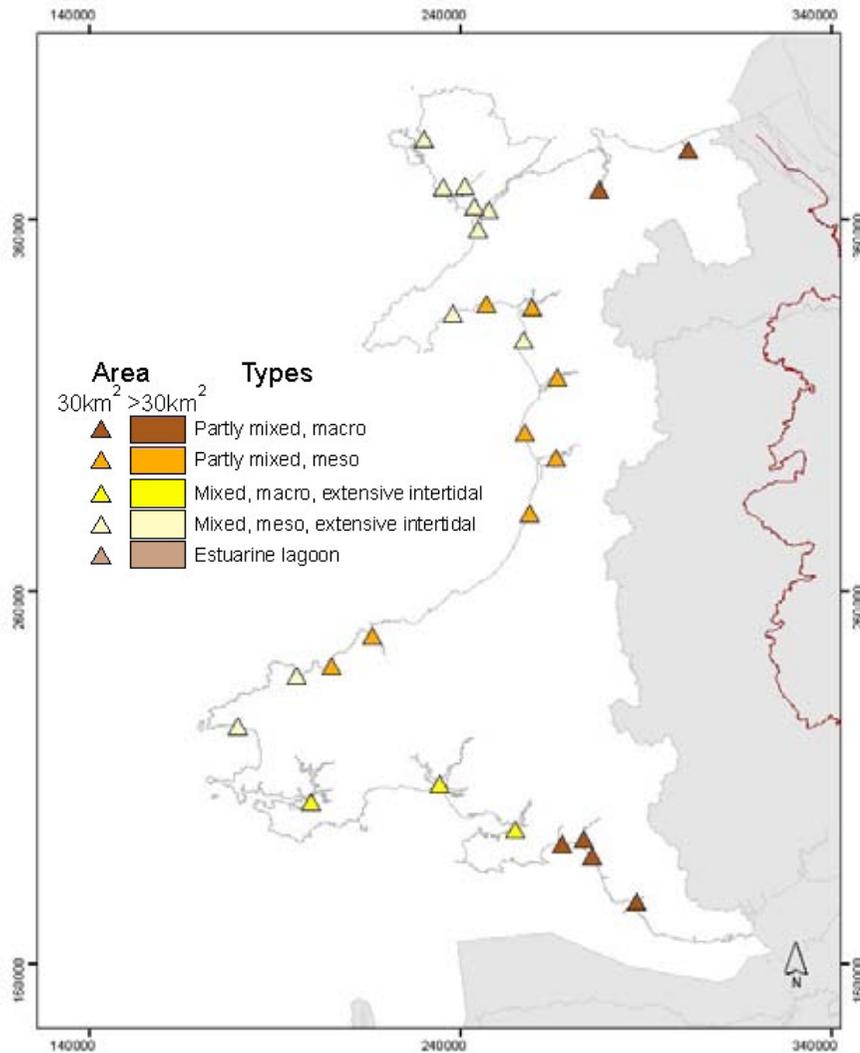
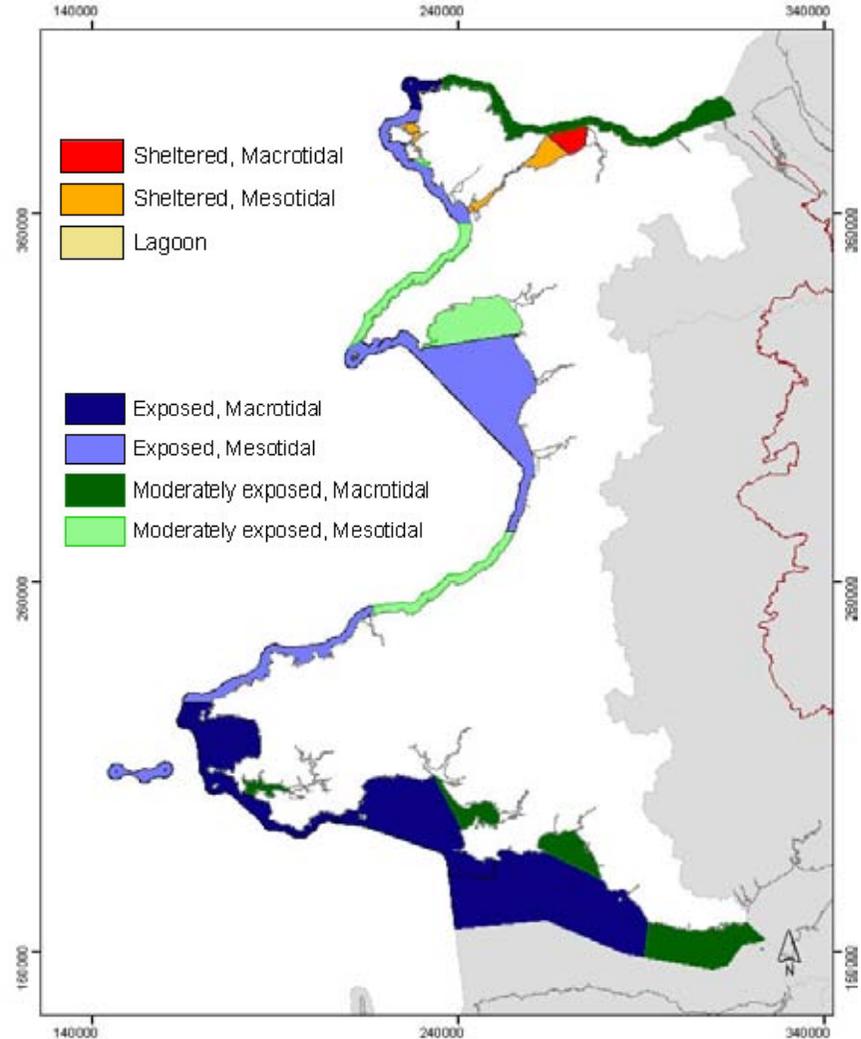


Figure 5.3 Coastal Water Body Types in West of Wales



Source: Environment Agency, 2008.

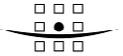


Figure 5.4 Chemical Status for Estuarine and Coastal Waters in West of Wales

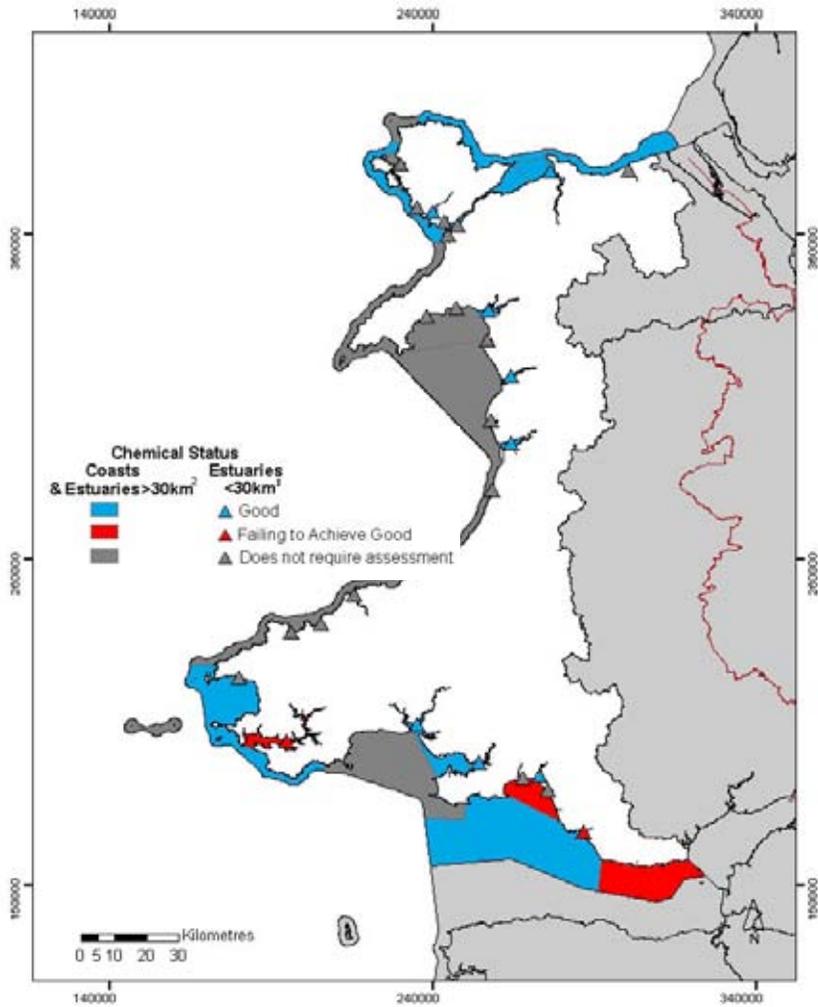
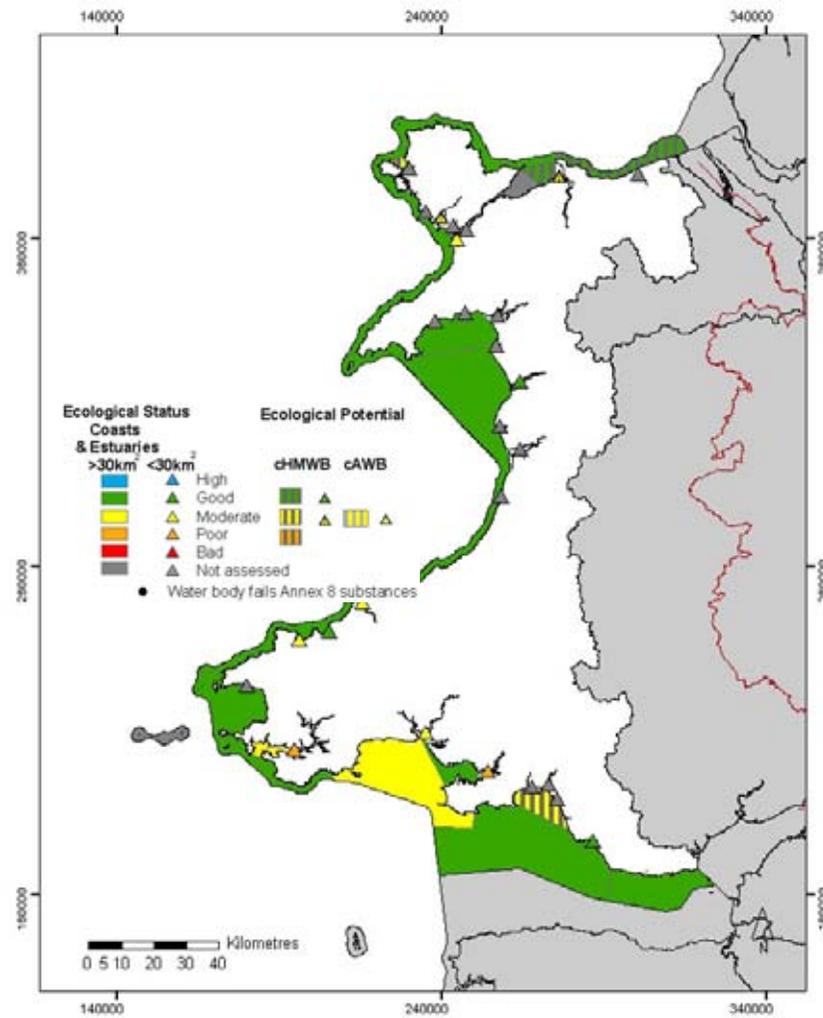
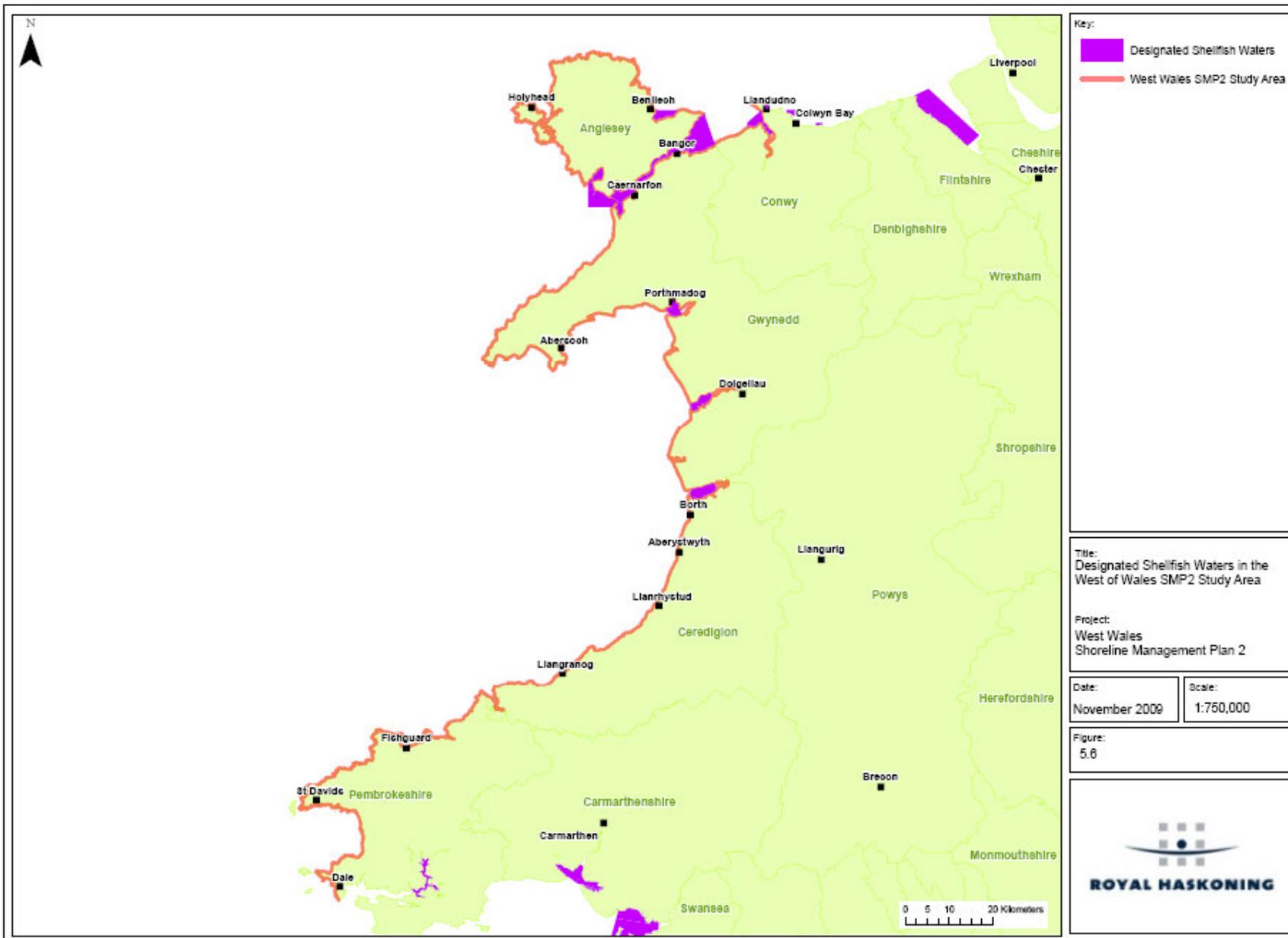


Figure 5.5 Ecological Status for Estuarine and Coastal Waters in West of Wales



Source: Environment Agency, 2008.

Figure 5.6 Designated Shellfish Waters in the West of Wales SMP2 Study Area



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6 COASTAL PROCESSES AND COASTAL MANAGEMENT

6.1 Introduction

6.1.1 This section provides an account of the coastal processes and the existing coastal management within the West of Wales SMP2 study area.

6.2 Overview

Wave Climate

6.2.1 Waves are created by wind in all directions across the Irish Sea, but the relatively small width of the sea limits the height that these waves can grow to. Larger wind waves and oceanic swell move from the southwest to the northeast through St Georges Channel. Because of this direction of movement, larger waves would be expected on the Welsh coastline than on the eastern shores of Ireland. The south coast of Pembrokeshire is most exposed to these conditions, and so should be subjected to the largest and most energetic waves.

6.2.2 Pembrokeshire shelters some southern parts of Cardigan Bay and this protection is enhanced in local areas by the numerous rocky headlands such as Strumble Head and Cemaes Head. However the protection is not absolute; the processes of shoaling and diffraction allow waves to turn towards the coastline and to radiate into sheltered areas. In central and northern Cardigan Bay the sheltering effect of Pembrokeshire diminishes, and the coast is more exposed to the large waves from the southwest. However there is some loss of wave energy as they propagate over fairly gently shallowing water to reach the coast.

6.2.3 The southern origin of the dominant waves along the coast of Cardigan Bay means that beach material tends to be driven towards the north. This is the reason for the north-pointing spits found along this coast, as at Ynyslas, Tywyn, and Fairbourne.

6.2.4 Along the south side of the Lleyn Peninsula the coast becomes more exposed to the large waves from the south west. There is less sheltering and, because deeper water extends closer inshore, waves lose less of their energy before arriving at the coast. The orientation of the peninsula, relative to the dominant waves, means that beaches tend to be moved east.

6.2.5 From the tip of the Lleyn Peninsula to Great Orme's Head, the coast faces into the northern Irish Sea. The passage to the Atlantic (North Channel) is quite slender and so relatively little oceanic swell enters through it. In addition the Isle of Man provides some shelter from that direction. Some wave energy does pass into this area from St George's Channel, but most of the waves arriving at this part of the coast are created in the Irish Sea. Consequently the direction of wave travel is quite diverse in this area, although the largest waves are still generally from the west and southwest. The irregular form of the coast and the large scale features of Anglesey, and the Lleyn Peninsula, lead to much more alongshore variation in wave conditions than is found along the Cardigan Bay coastline.

Tides

6.2.6 Tides are created, for the most part, by the gravitational attraction of the moon and sun. In general terms, when both the moon and sun are aligned (during a full moon or a new moon) their gravitational forces are also aligned, and high ('spring') tides occur. At the

other extreme, when the moon is at its first or last quarter, these gravitational forces pull in roughly perpendicular directions, and so smaller ('neap') tides are formed.

- 6.2.7 Tides travel around the earth, responding to the movement of the moon and sun (relative to the earth). They are most easily understood as very long waves. These 'tidal waves' approach the British Isles from the Atlantic. They pass through the Celtic Sea before reaching St David's Head, and moving north up the coast of the West of Wales. It can take around four hours for them to pass from St David's Head to Anglesey. This is why more northerly parts of the Welsh coast experience high tides later than more southerly areas.
- 6.2.8 The speed and height of a wave is affected by the depth of water it moves through, and by constraints it encounters. For example the Irish Sea is narrower at Holyhead than at Aberystwyth and as a result the tidal range is greater at Holyhead.
- 6.2.9 Differences in the timing and height of the tide cause dramatic effects at the Menai Strait. Because the tidal wave must travel around the Isle of Anglesey, high tides reaches the northern opening around one hour after it reaches the southern entrance. In addition the spring tidal range is around 2.7m greater at the north end of the strait. These differences in water level drive very strong currents.
- 6.2.10 Because the motion of astronomical bodies is well understood, tides are highly predictable. However the observed water level is rarely that which is predicted, and this is normally due to surge. The term 'surge' refers to meteorologically forced changes in sea level. These are driven by wind and atmospheric pressure, which are closely linked and highly influence the overall surge variation along the coast of West of Wales. For example, at St Davids Head extreme water levels (1:100) are under 4m; Tywyn and Criccieth near 4.5m; and as waves travels around the end of the Llyn Peninsula the maximum water level reduces (above 3.5m) (see West Wales SMP2: Review of Coastal Processes and Geology, Haskoning, 2009).

Sediment Sources

- 6.2.11 The great diversity of the coast of the West of Wales is reflected in the variety of different key sediment sources including the following:
- Cliff weathering and erosion release sediments of a variety of types and at a range of rates, for example sediment tends to be released very slowly from the hard rocks of Pembrokeshire in comparison to the till cliffs along the coast of the Llyn Peninsula and at Mochras. These rocks tend to be a good source of sediment because they are both readily eroded by wave action and often contain high quantities of material suitable for beach building, such as sand and gravel.
 - Still higher rates of sediment release can occur from features formed by the coast itself, such as dunes. The northern section of the coast of West of Wales has extremely large dune systems, some of which have shown erosion in recent decades, such as at Aberdovey, Morfa Dyffryn and Newborough Warren. The sand released in this way is drawn into local beaches and the nearshore zone, where it may be transported and deposited over large distances.
 - Material also arrives at the coast from offshore sources. In very broad terms sediment tends to accumulate in relatively protected areas. Good examples of this exist at the Glaslyn/Dwryd estuary, Conwy Bay and the Menai Straits.
 - Most of the offshore area of Cardigan Bay and Caernarfon Bay is covered by a thick layer of boulder clay. As it is eroded it releases mud which typically moved

offshore and settles, or is trapped by calm areas within estuaries. The erosion also releases gravel, which tends to form a thin layer over the boulder clay and this in turn may be covered by areas of finer sediments. The gravel is not necessarily immobile; in some areas it supplies material to adjoining beaches, as at Gwbert, and Nefyn.

- Small sand banks exist on the north and south of Bardsey Sound and are believed to be formed of sand. The largest, Bastram Shoal, rises from a water depth of around 40 m, to within 6 m of the surface of the sea. Sand from this area supplies the dunes at Newborough Warren and Morfa Dinlle.
- Potential exchange of sediment between offshore sand sheets and small sandy pocket beaches along Cardigan Bay and south of Towyn.
- The tidal flows out of the Dyfi and Mawddach estuaries cause a southward movement of sediment off their mouths, but this returns to move northward further offshore, as the effects of the estuary tidal jet diminishes.
- Rivers and estuaries can act as important sources of coastal sediment. However, along the coast of the West of Wales the estuaries are more likely to take in sediments and hold them, or to be sediment neutral. The exceptions to this are the estuaries of the Dyfi, which delivers sand to the coastal and nearshore zone and, though more weakly, the Teifi and Traeth Dulas.

Sediment Transport

- 6.2.12 The policy management boundaries of the West of Wales SMP2 have been selected at places where there is little sediment exchange. There is, therefore, little flow of sediment at St Ann's Head and around Great Orme's Head. In addition, little sediment is entering Cardigan Bay from the south (around St David's Head) or north (around Bardsey Island), and the outer part of the bay is largely starved of mobile sediment. However, sediment in the inner bay may be moved inshore to beaches by waves and tidal currents.
- 6.2.13 Off the southern coast of Cardigan Bay, from the Teify estuary to west of Strumble Head, the direction of net sand transport is to the south-west. In the northern outer part of the bay, sand moves generally northward and eastward. North of the Lleyn Peninsula, net sand transport is to the north-east into Caernarfon Bay. There is a parting of sediment transport between Bardsey Island and the Irish coast, with the net sand transport diverging to both the north and south.
- 6.2.14 Around the crenulate shorelines of Pembrokeshire, the western Lleyn and much of Anglesey, beaches are held between headlands. In this situation the longshore transport tends to be weak because of the effects of shoaling within the bays, and diffraction around the headlands. If longshore currents do exist, they tend to reduce as they push sediment towards one side of the bay, and the beach line rotates to face the incoming waves.
- 6.2.15 Off the southern coast of Cardigan Bay, from the Teify estuary to west of Strumble Head, the direction of net sand transport is to the south-west. In the northern outer part of the bay, sand moves generally northward and eastward. North of the Lleyn Peninsula, net sand transport is to the north-east into Caernarfon Bay. There is a parting of sediment transport between Bardsey Island and the Irish coast, with the net sand transport diverging to both the north and south.

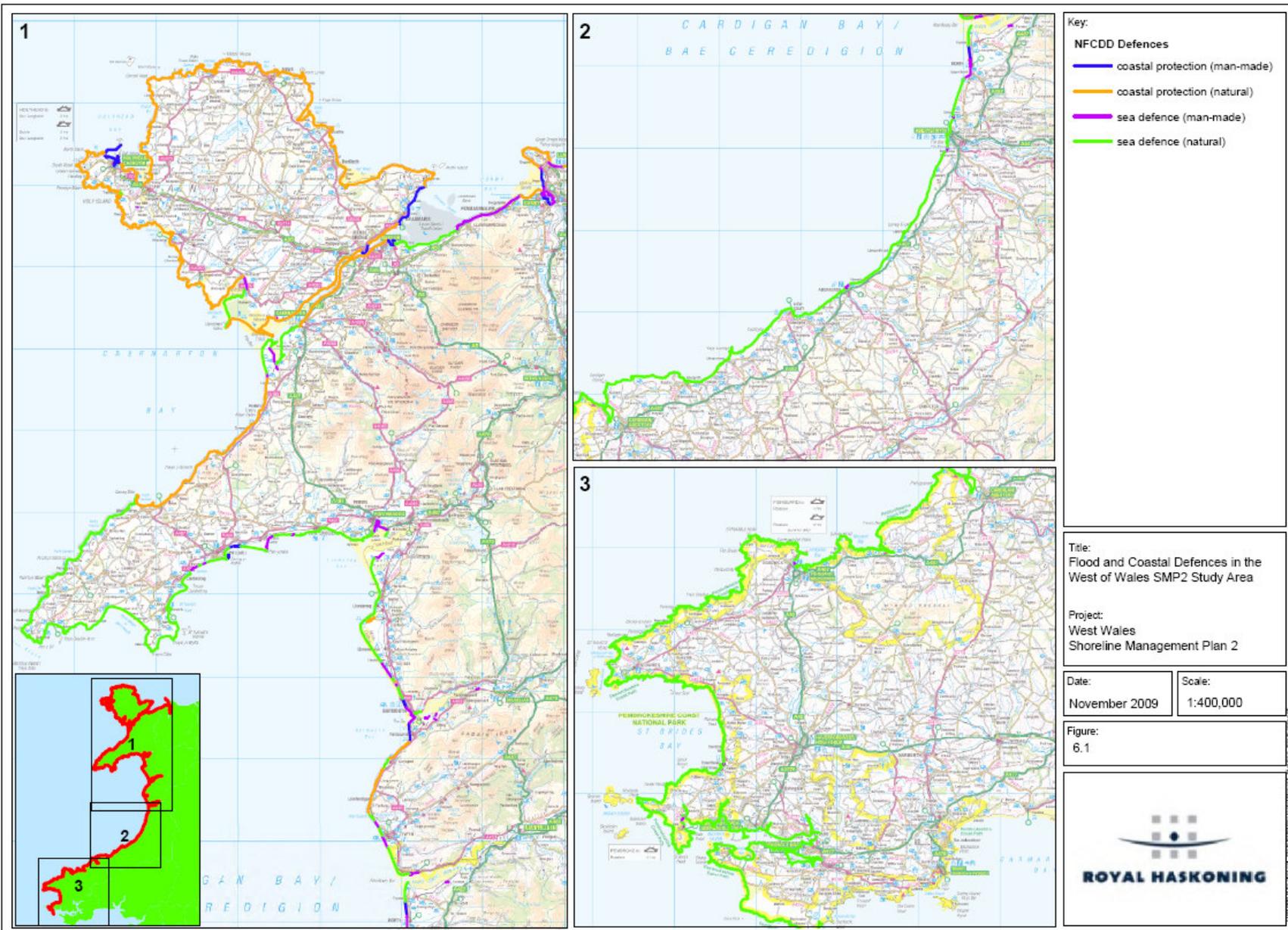
6.2.16 Along much of Cardigan Bay the dominance of waves from the southwest results in a net northerly alongshore transport; although this may be stopped or reversed in some local areas. This overall behaviour can be clearly seen in the north-pointing spits found across the mouths of the estuaries, as at Ynyslas, Tywyn and Fairbourne. At the north of Cardigan Bay, sediment tends to accumulate around Tremadog Bay. Here the northerly transport converges with material moved east along the south coast of the Llyn Peninsula. A similar pattern of convergence can be seen at the southern opening of the Menai Strait. Here spits extend in from both sides; they are kept apart by strong tidal flows through the Strait.

Coastal and Flood Defences

6.2.2 The Coast Protection Act 1949 provides maritime district councils with permissive powers to carry out coastal protection works. Both the Maritime District Councils and Environment Agency have powers to carry out defence works. Protection works are promoted by the operating authorities where there is community benefit.

6.2.3 **Figure 6.1** provides an overview of the locations and types of flood and coastal defences associated with the West of Wales SMP2. Coastal defences are associated with structures that protect the natural or built environment against the impacts of erosion through either man-made (e.g. walls) or natural (e.g. sand bar) structures, while sea defences are associated with the protection against flooding. Sea defences can also consist of either man-made (e.g. walls) or natural (e.g. shingle ridge / dune system) structures.

Figure 6.1 Flood and Coastal Defences in the West of Wales SMP2 Study Area



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7 GEOLOGY AND SOILS

7.1 Introduction

7.1.1 This section provides an account of the solid geology, soils, and presence of landfill or other soil quality issues within the West of Wales SMP2 study area.

7.2 Overview

7.2.1 The West of Wales coastline is renowned for its spectacular geology, which has provided the field evidence for understanding the rocks of the Cambrian, Ordovician, Silurian and Carboniferous Periods in geological time. Its long geological history is recognisable in the landscape but is most easily read in its complex rocky coastline. These geological features are of geological importance internationally, nationally and to the region. Natural erosion is one of the key drivers in maintaining geological interest features of the coastline within the SMP2 study area by exposing rock sequences in cliff faces. Coastal defence works have the potential to halt this process to the detriment of the interest features.

Solid Geology

7.2.2 Geology frequently controls the strongest influence in the landscape profoundly affecting vegetation cover, drainage patterns, landscape character and the human environment. The Cardigan Bay coast is formed from well-bedded Ordovician and Silurian shales and sandstones. Much of this sedimentary coastline was formed in the Paleozoic Welsh Basin. The basin extended to the shelf-sea areas of the Welsh Border, South West Wales, North Wales Coast and the Llyn Peninsula and may have been many hundreds of metres deep.

Geological Features of Importance

7.2.3 Rocks, minerals, fossils and landforms are all integral parts of our natural heritage and form important features and components of the coastal landscape. There are a number of site of geological interest within the West of Wales SMP2 area.

International Protected Sites

7.2.4 Some geological sites are World Heritage Sites, others may become European Geosites. Wales doesn't have any internationally protected geosites, although some Welsh sites are used as 'yardsticks' or reference sites by scientists throughout the world.

7.2.5 Wales does have two European Geoparks which form part of a Europe wide network of sites being conserved because of their geological importance. One of these sites the Isle of Angleseys geopark know as GeoMôn occurs within the SMP2 study and includes outstanding examples of Precambrian geology and is one of the finest places to study plate tectonic processes and features.

National Protected Sites

7.2.6 Geological SSSIs (see **Table 7.1**) or sites selected as the very best sites in Britain for geological and geomorphological research under the Geological Conservation Review (GCR) are designated by CCW who are also responsible for ensuring GCR sites in Wales are designated as SSSIs. Based on the original GCR data there are about 463 of these sites in Wales of which 126 occur within the study boundary (**Table 7.2**). Geological SSSIs are legally protected like their biological counterparts, and some are incorporated within National Nature Reserves (NNR).

Table 7.1 Geological SSSIs and features within the West of Wales SMP2 Study Area

SSSI Site Name	Condition	Feature description
Aber Mawr	Unfavourable	Quaternary of Wales
Aberarth - Carreg Wylan	Unfavourable	Caledonian structures of Wales
		Quaternary of Wales
Afon Teifi	No data	Fluvial geomorphology of Wales
Allt Wen a Traeth Tanybwlich	No data	Caledonian structures of Wales
Arfordir Abereiddi	No data	Arenig - Llanvirn
		Ordovician - Silurian igneous
Arfordir Marros-Pentywyn / Marros-Pendine Coast	No data	Coastal geomorphology of Wales
		Namurian of England and Wales
		Quaternary of Wales
Arfordir Niwglwl - Aber bach / Newgale to Little Haven Coast	No data	Variscan structures of South Wales and the Mendips
		Westphalian
Arfordir Penrhyn Angle / Angle Peninsula Coast	No data	Quaternary of Wales
Arfordir Saundersfoot - Telpyn / Saundersfoot - Telpyn Coast	No data	Westphalian
Borth - Clarach	No data	Caledonian structures of Wales
Cadnant	Favourable	Caradoc-Ashgill
Carmel Head	Favourable	Caledonian structures of Wales
		Precambrian of England and Wales
Castlemartin Cliffs and Dunes	No data	Coastal geomorphology of Wales
		Variscan structures of South Wales and the Mendips
Craigyfulfran & Clarach	Favourable	Caledonian structures of Wales
		Llandovery
		Quaternary of Wales
Cregennen a Pared y Cefn Hir	Favourable	Arenig - Llanvirn
		Ordovician - Silurian igneous
Creigiau Abergwaun (Fishguard Cliffs)	Favourable	Arenig - Llanvirn
Creigiau Cwm-Ceriw a Ffos-las (Morfa Bychan)	Favourable	Quaternary of Wales
Creigiau Rhiwledyn/Little Ormes Head	No data	Dinantian of northern England and North Wales
Dale and South Marloes Coast	No data	Llandovery
		Non-marine Devonian
		Ordovician - Silurian igneous
		Variscan structures of South Wales and the Mendips
Deganwy Quarries And Grassland	No data	Caradoc-Ashgill
De Porth Sain Ffraidd / St Bride's Bay South	No data	Variscan structures of South Wales and the Mendips
Dinas Dinlle	Favourable	Quaternary of Wales
Dwrhyd Pit	Unfavourable	Cambrian

SSSI Site Name	Condition	Feature description
Dyfi	No data	Coastal geomorphology of Wales
		Quaternary of Wales
Foel Ispri	Favourable	Mineralogy of Wales
Freshwater East Cliffs to Skrinkle Haven	No data	Non-marine Devonian
Gas Works Lane Section (Haverfordwest)	Unfavourable	Llandovery
Glannau Rhoscolyn	No data	Precambrian of England and Wales
Glannau Ynys Gybi/ Holy Island Coast	No data	Precambrian of England and Wales
Henborth	Favourable	Quaternary of Wales
Llanbadrig - Dinas Gynfor	No data	Arenig - Llanvirn
		Caledonian structures of Wales
		Precambrian of England and Wales
Milford Haven Waterway	No data	Non-marine Devonian
Newborough Warren - Ynys Llanddwyn	No data	Coastal geomorphology of Wales
		Precambrian of England and Wales
Pen y Gogarth / Great Ormes Head	No data	Dinantian of northern England and North Wales
		Mineralogy of Wales
Ramsey / Ynys Dewi	No data	Arenig - Llanvirn
		Ordovician - Silurian igneous
Rhosneigr	Favourable	Caledonian structures of Wales
St. David's Peninsula Coast		Assemblage of RDB and/or Nationally Scarce vascular plants
		Coastal geomorphology of Wales
		Precambrian of England and Wales
Stackpole Quay - Trewent Point	No data	Wenlock
St. David's Peninsula Coast	No data	Coastal geomorphology of Wales
		Quaternary of Wales
Strumble Head - Llechdafad Cliffs	No data	Ordovician - Silurian igneous
		Ordovician - Silurian igneous
Tenby Cliffs and St. Catherine's Island	No data	Namurian of England and Wales
Traeth Lligwy	No data	Caledonian structures of Wales
		Dinantian of northern England and North Wales
		Non-marine Devonian
Tywyn Aberffraw	No data	Coastal geomorphology of Wales
Twyni Lacharn - Pentywyn / Laugharne - Pendine Burrows	No data	Coastal geomorphology of Wales
Waterwynch Bay to Saundersfoot Harbour	No data	Westphalian

Table 7.2 Coastal GCR Sites and Relevant SSSIs in West of Wales SMP2 Study Area

Site	GCR block	SSSI	SSSI type
Aberarth Morfa	Llandovery	Creigiau Aberarth-Morfa	GEO
Allt Wen	Caledonian structures of Wales	Allt Wen A Traeth Tanybwloch	MIX
Barmouth Hillside	Cambrian	Barmouth Hillside	MIX
Clarach	Quaternary of Wales	Craigyfulfran & Clarach	GEO
Clogau Mine	Mineralogy of Wales		
Craigyfulfran	Llandovery	Craigyfulfran & Clarach	GEO
Craigyfulfran (Cormorant Rock)	Caledonian structures of Wales	Craigyfulfran & Clarach	GEO
Cwm Tudu	Caledonian structures of Wales	Aberarth - Carreg Wylan	MIX
Foel Ispri Mine	Mineralogy of Wales	Foel Ispri	GEOL
Friog Undercliff	Mineralogy of Wales	Glannau Tonfanau I Friog	MIX
Llanon	Quaternary of Wales	Traeth Llanon	GEO
Llynau Cregennen	Arenig - Llanvirn	Cregennen A Pared Y Cefn Hir	GEO
Morfa Bychan	Quaternary of Wales	Creigiau Cwm-Ceriw A Ffos-Las (Morfa Bychan)	GEO
Morfa Dyffryn	Coastal geomorphology of Wales	Morfa Dyffryn	MIX
Morfa Harlech	Coastal geomorphology of Wales	Morfa Harlech	MIX
Mwnt (Traeth-y-Mwnt)	Quaternary of Wales	Aberarth - Carreg Wylan	MIX
North Clarach	Caledonian structures of Wales	Borth - Clarach	GEO
Pared y Cefn Hir	Ordovician - Silurian igneous	Cregennen A Pared Y Cefn Hir	GEO
Traeth Penbryn	Caledonian structures of Wales	Aberarth - Carreg Wylan	MIX
Vigra Mine	Mineralogy of Wales	Mwynfa'r Figra	GEO
Ynyslas	Coastal geomorphology of Wales	Dyfi	MIX
Ynyslas & Borth	Quaternary of Wales	Dyfi	MIX
Afon Seiont	Arenig - Llanvirn	Afon Seiont	GEO
Braich-y-Pwll to Parwyd	Precambrian of England and Wales	Glannau Aberdaron	MIX
Bwlch Mine	Mineralogy of Wales	Bwlch Mine	GEO
Cadnant Cutting	Caradoc-Ashgill	Cadnant	GEO
Cae'r Sais	Precambrian of England and Wales		
Carmel Head	Precambrian of England and Wales	Carmel Head	
Carmel Head	Caledonian structures of Wales	Carmel Head	
Deganwy Quarries	Caradoc-Ashgill	Deganwy Quarries And Grassland	
Dinas Dinlle	Quaternary of Wales	Dinas Dinlle	GEO
Flagstaff Quarry	Dinantian of northern England and North Wales	Glannau Penmon - Biwmares	
Glanllynau	Quaternary of Wales	Glanllynau A Glannau Pen-Ychain I Gricieth	GEO/MAR
Great Orme	Dinantian of northern England and North Wales	Pen Y Gogarth / Great Ormes Head	MIX
Great Orme Copper Mines	Mineralogy of Wales	Pen Y Gogarth / Great Ormes Head	MIN WAL
Gwydir Bay	Quaternary of Wales	Gwydir Bay	GEO
Hen Borth	Quaternary of Wales	Henborth	GEO

Site	GCR block	SSSI	SSSI type
Little Orme	Dinantian of northern England and North Wales	Creigiau Rhiwledyn/Little Ormes Head	
Llanbadrig Area	Precambrian of England and Wales	Llanbadrig - Dinas Gynfor	GEO
Llanbedrog	Ordovician - Silurian igneous	Mynydd Tir Y Cwmwd A'r Glannau At Garreg Yr Imbill	
Llanddwyn Island	Precambrian of England and Wales	Newborough Warren - Ynys Llanddwyn	MIX
Lleiniog	Quaternary of Wales	Glannau Penmon - Biwmares	GEO
Lligwy Bay (Traeth Lligwy)	Dinantian of northern England and North Wales	Traeth Lligwy	GEO
Lligwy Bay (Traeth Lligwy)	Caledonian structures of Wales	Traeth Lligwy	GEO
Marquis of Anglesey's Column	Precambrian of England and Wales		
Morannedd	Quaternary of Wales	Tiroedd A Glannau Rhwng Cricieth Ac Afon Glaslyn	MIX
Mynydd Penarfynydd	Ordovician - Silurian igneous	Mynydd Penarfynydd	MIX
Nant Mine	Mineralogy of Wales	Benallt Mine And Nant Y Gadwen	GEO
Nant-y-Gadwen	Arenig - Llanvirn	Benallt Mine And Nant Y Gadwen	GEO
Newborough Warren	Coastal geomorphology of Wales	Newborough Warren - Ynys Llanddwyn	MIX
Ogof Gynfor	Caledonian structures of Wales	Llanbadrig - Dinas Gynfor	GEO
Ogof Gynfor - Hell's Mouth	Arenig - Llanvirn	Llanbadrig - Dinas Gynfor	GEO
Pen Benar	Tremadoc	Pen Benar	GEO
Penrhyn Bodeilias	Ordovician - Silurian igneous	Porth Dinllaen I Borth Pistyll	
Penrhyn Nefyn Foreshore Section	Precambrian of England and Wales	Porth Dinllaen I Borth Pistyll	GEO/MAR
Porth Ceiriad	Cambrian	Porth Ceiriad, Porth Neigwl Ac Ynysoedd Sant Tudwal	MIX
Porth Ceiriad	Quaternary of Wales	Porth Ceiriad, Porth Neigwl Ac Ynysoedd Sant Tudwal	MIX
Porth Neigwl	Quaternary of Wales	Porth Ceiriad, Porth Neigwl Ac Ynysoedd Sant Tudwal	GEO
Porth Neigwl	Coastal geomorphology of Wales	Porth Ceiriad, Porth Neigwl Ac Ynysoedd Sant Tudwal	GEO
Porth Oer	Quaternary of Wales	Glannau Aberdaron	MIX
Porth-y-Mor	Non-marine Devonian	Traeth Lligwy	GEO
Red Wharf Bay (Traeth Coch)	Quaternary of Wales	Trwyn Dwlban	GEO
Rhiw-for-Fawr	Cambrian-Tremadoc	Rhiw-For-Fawr	GEO
Rhoscolyn	Precambrian of England and Wales	Glannau Rhoscolyn	MIX
Rhosneigr	Caledonian structures of Wales	Rhosneigr	GEO
South Stack	Precambrian of England and Wales	Glannau Ynys Gybi: Holy Island Coast	MIX
Tandinas Quarry	Dinantian of northern England and North Wales	Arfordir Gogleddol Penmon	GEO
Trwyn Carreg y Tir	Cambrian	Porth Ceiriad, Porth Neigwl Ac Ynysoedd Sant Tudwal	MIX
Trwyn Dwlban	Dinantian of northern England and North Wales	Trwyn Dwlban	GEO

Site	GCR block	SSSI	SSSI type
Trwyn Llech y Ddol	Arenig - Llanvirn	Porth Ceiriad, Porth Neigwl Ac Ynysoedd Sant Tudwal	MIX
Trwyn y Gorlech to Yr Eifl Quarries	Ordovician - Silurian igneous	Yr Eifl	
Tywyn Aberffraw	Coastal geomorphology of Wales	Tywyn Aberffraw	MIX
Wig Bach	Arenig - Llanvirn	Wig Bach A'r Glannau I Borth Alwm	GEO/MAR
Aber Mawr to Porth Lleuog	Ordovician-Silurian Igneous	Ramsey / Ynys Dewi	MIX
Abergwaun	Arenig - Llanvirn	Creigiau Abergwaun (Fishguard Cliffs)	GEO
Abermawr	Quaternary of Wales	Aber Mawr	GEO
Albion Sands & Gateholm Island	Non-marine Devonian	Dale And South Marloes Coast	MIX
Blucks Pool - Bullslaughter Bay	Dinantian of southern England and South Wales	Castlemartin Cliffs And Dunes	MIX
Broad Haven to Settling Nose	Variscan structures of South Wales and the Mendips	Arfordir Niwawl - Aber Bach / Newgale To Little Haven Coast	MIX
Carmarthen Bay	Coastal geomorphology of Wales	Various	MIX
Castell Coch to Trwyncastell	Ordovician - Silurian igneous	Arfordir Abereiddi	MIX
Deer Park	Llandovery	Dale And South Marloes Coast	MIX
Dinas & Esgyrn Bottom	Quaternary of Wales	Esgyrn Bottom	MIX
Druidston	Quaternary of Wales	Arfordir Niwawl - Aber Bach / Newgale To Little Haven Coast	MIX
Druidston Haven	Variscan structures of South Wales and the Mendips	Arfordir Niwawl - Aber Bach / Newgale To Little Haven Coast	MIX
Dwrhyd Pit	Cambrian	Dwrhyd Pit	GEO
Freshwater East	Palaeozoic palaeobotany	Freshwater East Cliffs To Skrinkle Haven	MIX
Freshwater East	Wenlock	Stackpole Quay - Trewent Point	MIX
Freshwater East (North)	Variscan structures of South Wales and the Mendips	Freshwater East Cliffs To Skrinkle Haven	MIX
Freshwater West (North)	Variscan structures of South Wales and the Mendips	Broomhill Burrows	MIX
Freshwater West (South)	Variscan structures of South Wales and the Mendips	Castlemartin Cliffs And Dunes	MIX
Gasworks Lane	Llandovery	Gas Works Lane Section (Haverfordwest)	GEO
Little Castle Head	Non-marine Devonian	Milford Haven Waterway	MIX
Llanvirn - Abereiddy	Arenig - Llanvirn	Arfordir Abereiddi	MIX
Marloes	Llandovery	Dale And South Marloes Coast	MIX
Marloes	Wenlock	Dale And South Marloes Coast	MIX
Marloes Sands to Albion Sands	Variscan structures of South Wales and the Mendips	Dale And South Marloes Coast	MIX
Marros	Namurian of England and Wales	Arfordir Marros-Pentywyn / Marros-Pendine Coast	MIX
Marros Sands [orig. Ragwen Point]	Quaternary of Wales	Arfordir Marros-Pentywyn / Marros-Pendine Coast	MIX
Mill Haven	Variscan structures of South Wales and the Mendips	De Porth Sain Ffraid / St Bride's Bay South	MIX
Musselwick Bay	Variscan structures of South Wales and the Mendips	De Porth Sain Ffraid / St Bride's Bay South	MIX

Site	GCR block	SSSI	SSSI type
Musselwick Sands	Variscan structures of South Wales and the Mendips	De Porth Sain Ffraid / St Bride's Bay South	MIX
Nolton Haven Coast	Westphalian	Arfordir Niwgwl - Aber Bach / Newgale To Little Haven Coast	MIX
Ogof Hen	Arenig - Llanvirn	Ramsey / Ynys Dewi	MIX
Pen-caer	Ordovician - Silurian igneous	Strumble Head - Llechdafad Cliffs	MIX
Poppit Sands	Quaternary of Wales	Aberarth - Carreg Wylan	MIX
Porth Clais	Quaternary of Wales	St. David's Peninsula Coast	MIX
Porth-y-Rhaw	Cambrian	St. David's Peninsula Coast	MIX
Skomer Island	Ordovician - Silurian igneous	Skomer Island And Middleholm	MIX
Solfach	Coastal geomorphology of Wales	St. David's Peninsula Coast	MIX
Solva Harbour	Cambrian	St. David's Peninsula Coast	MIX
South Pembroke Cliffs	Coastal geomorphology of Wales	Castlemartin Cliffs And Dunes	MIX
St Ann's Head	Variscan structures of South Wales and the Mendips	Dale And South Marloes Coast	MIX
St David's Coast	Precambrian of England and Wales	St. David's Peninsula Coast	MIX
St David's Head	Ordovician - Silurian igneous	St. David's Peninsula Coast	MIX
St Non's to Caerfai Bay	Cambrian	St. David's Peninsula Coast	MIX
Stackpole Quay	Variscan structures of South Wales and the Mendips	Stackpole Quay - Trewent Point	MIX
Tenby Beach	Namurian of England and Wales	Tenby Cliffs And St. Catherine's Island	MIX
Tenby Cliffs	Non-marine Devonian	Freshwater East Cliffs To Skrinkle Haven	MIX
Tenby Cliffs	Dinantian of southern England and South Wales	Tenby Cliffs And St. Catherine's Island	MIX
Tenby to Saundersfoot Coast	Westphalian	Tenby Cliffs And St. Catherine's Island	MIX
Trwyn Cynddeiriog	Cambrian	St. David's Peninsula Coast	MIX
West Angle Bay	Quaternary of Wales	Arfordir Penrhyn Angle / Angle Peninsula Coast	MIX
West Angle Bay (North)	Non-marine Devonian	Arfordir Penrhyn Angle / Angle Peninsula Coast	MIX
Whitesands Bay	Arenig - Llanvirn	St. David's Peninsula Coast	MIX
Wiseman's Bridge - Amroth Coast	Westphalian	Arfordir Saundersfoot - Telpyn / Saundersfoot - Telpyn Coast	MIX

Local and Regional Sites

7.2.7

The most important places for geology, geomorphology and soils outside the nationally recognised SSSI geological sites are designated as Regionally Important Geodiversity Sites (RIGS) by local authorities. Unlike SSSI, RIGS are not legally protected. Most planning authorities include RIGS in their structure plans, placing them on constraints registers and affording protection through the planning process. Many UK RIGS groups operate under the umbrella of the UKRIGS organisation. In Wales, groups in North East Wales (NEWRIGS) Gwynedd & Môn RIGS and Central Wales RIGS group operate under a national body called the Association of Welsh RIGS Groups (AWRG).

7.2.8 Whereas GCR sites are selected primarily for their scientific and research value, RIGS may be selected for historical, educational and aesthetic reasons in addition to scientific qualities. An important aspect of RIGS selection is to represent the distinctiveness and character of local/regional geodiversity. Of the 567 RIGS recorded for Wales 180 occur within the SMP2 study area. These sites are identified in **Table 7.3** including feature categories and their locations are presented in **Figure 7.1**.

Table 7.3 Coastal Regionally Important Geodiversity Sites (RIGS) in the SMP2 Study Area

RIGS	Category	Feature category	Authority
New Quay	Scientific / Educational	Stratigraphy / Structural geology	Ceredigion
Craig y Delyn (Harp Rock)	Scientific / Educational	Stratigraphy	Ceredigion
Friog Coastal Section	Scientific / Educational	Stratigraphy	Gwynedd
Vigra Mine	Scientific	Mineralogy	Gwynedd
Little Ormes Head	Scientific / Aesthetic	Quaternary & Geomorphology	Conwy
Llandudno North Shore	Educational / Scientific	Quaternary & Geomorphology	Conwy
Din Lligwy, Lligwy Burial Chamber & Hen Capel Llig	Historical		Mon
Foel Ferry	Scientific	Stratigraphy	Mon
Great Orme Limestone Pavement	Scientific / Educational	Quaternary & Geomorphology	Conwy
Holyhead Roman Fort & Medieval Churches	Historical	Romand & Mediaevl buildings	Mon
Plas Newydd	Historical		Mon
Porth Nobla 1	Scientific	Stratigraphy	Mon
Porth Nobla 2	Scientific	Stratigraphy	Mon
Aberlleiniog	Scientific / Educational	Quaternary & Geomorphology	Mon
Beaumaris Cliff & Drumlin	Scientific	Quaternary & Geomorphology	Mon
Porth yr Ysgaw	Scientific	Quaternary & Geomorphology	Mon
Llanddona	Scientific	Quaternary & Geomorphology	Mon
Mermaid Inn	Scientific	Quaternary & Geomorphology	Mon
Penial Downyn	Scientific	Quaternary & Geomorphology	Mon
Penrhos Drumlin	Scientific	Quaternary & Geomorphology	Mon
Penrhyn y Gell	Scientific	Quaternary & Geomorphology	Mon
Porth Cwyfan	Scientific	Quaternary & Geomorphology	Mon
Porth Dryw	Scientific	Quaternary & Geomorphology	Mon
Porth Nobla 3	Scientific	Quaternary & Geomorphology	Mon
Trwyn y Penrhyn	Scientific	Quaternary & Geomorphology	Mon
Newborough Forest	Scientific	Stratigraphy	Mon
Ynys Llanddwyn	Scientific	Quaternary & Geomorphology	Mon
Gallow's Deep	Scientific	Quaternary & Geomorphology	Mon
Trwyn y Parc	Scientific	Geomorphology	Mon
Llangranog - Traeth yr Ynys Lochtyn	Educational / Aesthetic / Scientific	Stratigraphy / Structural Geology	Ceredigion
Carreg Ddu Headland	Educational / Scientific	Mineralogy	Gwynedd
Trefor Pier	Educational / Scientific	Mineralogy	Gwynedd
Ffynnon Badrig	Scientific	Palaeontology	Mon

RIGS	Category	Feature category	Authority
Llanbadrig Point	Scientific	Palaeontology	Mon
Marquis of Anglesey's Column	Scientific	Stratigraphy	Mon
Porth Trefadog	Scientific	Stratigraphy	Mon
Porth Padrig	Scientific / Aesthetic	Quaternary & Geomorphology	Mon
Porth Wen	Scientific	Quaternary & Geomorphology	Mon
Porth Swtan	Scientific	Quaternary & Geomorphology	Mon
Craig Wen & Porth Wen	Scientific	Structural geology / Metamorphism	Mon
Dennis Wood Memorial	Historical		Mon
Bwa Du	Scientific	Structural & Metamorphic	Mon
Porth y Corwgl	Scientific	Structural	Mon
Bwrdd Arthur	Aesthetic	Quaternary & Geomorphology	Mon
Mynydd Garreg	Historical / Educational	Mineralogy	Gwynedd
Lleidiog	Educational / Scientific	Igneous Petrology	Mon
Trwyn y Penrhyn, (Wylfa Head)	Scientific	Palaeontology	Mon
Careg-lwyd	Educational / Scientific	Tertiary	Mon
Pen Las Rock	Educational / Scientific	Igneous Petrology	Mon
Parlwr	Scientific	Mineralogy	Mon
Rhoscolyn Head	Scientific	Sedimentary / Structures?	Mon
Carmel Head	Scientific / Educational	Stratigraphy	Mon
Porth y Pwll	Scientific	Stratigraphy	Mon
Porth Wen	Historical	Historical	Mon
Llanfairpwll By-pass	Science	Stratigraphy / Mineralogy	Mon
South Stack	Science	Palaeontology	Mon
Little Orme Thrust	Scientific / Educational	Structural geology	Conwy
Cefn yr Ogof	Scientific	Stratigraphy / Quaternary & Geomorphology	Conwy
Blue Lake Quarry	Educational / Scientific	Stratigraphy	Gwynedd
Holyhead Breakwater Country park	Aesthetic / Educational	Igneous / Geomorphology	Mon
Moelfre	Educational / Scientific / Aesthetic	Quaternary & Geomorphology	Mon
Soldiers Point Bay	Scientific	Palaeontology	Mon
St. Anne's Car Park (Dale Street in Menai Bridge)	Scientific / Educational	Stratigraphy	Mon
Cerrig Moelion (Cae'r Sais)	Scientific / Educational	Mineralogy	Mon
Traeth Bychan 3	Aesthetic / Educational	Stratigraphy	Mon
Llanbadrig Point Coast	Scientific / Educational	Precambrian	Mon
Cemaes Bay	Educational	Precambrian	Mon
Skerries	Scientific	Stratigraphy	Mon
Gadlys Quarry	Scientific	Palaeontology	Mon
South Stack Moor	Educational	Structures / Metamorphic	Mon
Newborough & Llanddwyn	Scientific	Palaeontology	Mon

RIGS	Category	Feature category	Authority
Creigiau Cliperau	Scientific	Stratigraphy	Mon
Fynnon Eilian (Greenly Plaque)	Historical	Constructions	Mon
St Anne's Car park	Scientific / Educational	Stratigraphy	Mon
Cerrig Moelion	Scientific / Educational	Mineralogy	Mon
Traeth Bychan 2	Scientific / Educational	Palaeontology	Mon
Traeth Bychan 1	Scientific / Educational	Igneous	Mon
Benllech	Scientific	Quaternary / Geomorphology	Mon
Constitution Hill	Educational	Stratigraphy / Structure	Ceredigion
Traeth Lligwy	Scientific	Stratigraphy	Mon
Lligwy Bay	Scientific	Stratigraphy	Mon
Pedolau to Eglwys Siglen	Scientific	Stratigraphy	Mon
Moelfre to Traeth Bychan	Scientific	Stratigraphy	Mon
Penrhyn Point to Huslan	Scientific	Stratigraphy	Mon
Trwyn Dwiban	Scientific	Stratigraphy	Mon
Tandinas Quarry and Cliffs	Scientific	Stratigraphy	Mon
Fedw Fawr	Scientific	Stratigraphy	Mon
Flagstaff Quarry	Scientific	Stratigraphy	Mon
Porth Defaid	Scientific	Mineralogy	Mon
Porth Swtan	Scientific / Educational	Landscape Evolution	Mon
Porth Wnal Dolerite	Scientific / Educational	Mineralogy	Mon
Porth Wnal Granite	Scientific / Educational	Mineralogy	Mon
Trwyn y Penrhyn, Cemaes Bay	Scientific / Educational	Mineralogy	Mon
Point Lynas	Scientific / Educational / Aesthetic	Mineralogy	Mon
Ogof Fawr	Scientific	Mineralogy	Mon
Ogof Fach	Scientific	Mineralogy	Mon
Porth Namarch	Scientific / Educational / Aesthetic	Mineralogy	Mon
Porth Dafarch	Scientific / Educational	Mineralogy	Mon
Rhosygader	Scientific	Mineralogy	Mon
Porth Trecastell	Scientific / Educational	Mineralogy	Mon
Mynydd Bach	Scientific	Mineralogy	Mon
Llanfaelog	Scientific	Mineralogy	Mon
Felin-wen	Scientific	Mineralogy	Mon
Craig Fawr	Scientific / Educational	Mineralogy	Mon
Newborough Warren	Scientific / Educational / Aesthetic	Soils	Mon
Beaumaris (Salop)	Scientific	Soils	Mon
Upper Borth	Scientific	Stratigraphy / Structure	Ceredigion
Great Orme (Marcham)	Scientific	Soils	Conwy
Beaumaris (Flint)	Scientific / Educational	Soils	Mon
Rhosneigr	Scientific / Educational	Soils	Mon
Traeth Bach	Scientific	Stratigraphy	Mon
Porth y Mor	Scientific	Stratigraphy	Mon

RIGS	Category	Feature category	Authority
Ty'n Llan	Scientific		Mon
Rhyd y Gari	Scientific		Mon
Plas Newydd	Scientific / Historical		Mon
Traeth Bychan Igneous	Scientific / Educational / Aesthetic		Mon
Lawrenny Cliffs	Scientific	Stratigraphy	Pembrokeshire
Newport Sands	Scientific	Stratigraphy	Pembrokeshire
Poppit Sands	Aesthetic / Educational / Scientific	Stratigraphy / Structure	Pembrokeshire
Pwll-y-Wrach	Aesthetic / Educational / Scientific	Quaternary / Geomorphology	Pembrokeshire
St Dogmaels Landslide	Aesthetic / Educational / Scientific / Historical	Quaternary / Geomorphology	Pembrokeshire
West Williamston Quarries	Historical / Educational / Scientific	Stratigraphy	Pembrokeshire
Ceibwr Bay	Aesthetic / Educational / Scientific	Stratigraphy / Structure / Quaternary	Pembrokeshire
Church Doors - Lydstep Headland	Aesthetic / Educational / Scientific	Stratigraphy	Pembrokeshire
East Pickard Bay	Scientific	Stratigraphy / Igneous	Pembrokeshire
Porthgain	Aesthetic / Educational / Scientific / Historical	Stratigraphy / Igneous	Pembrokeshire
Pen-yr-Afr Cliffs	Aesthetic / Educational / Scientific	Stratigraphy / Structure	Pembrokeshire
St Brides Haven	Educational / Scientific	Stratigraphy / Structure	Penmbroekeshire
Mill Bay	Scientific	Stratigraphy	Pembrokeshire
Lindsway Bay	Educational / Historical / Scientific	Stratigraphy	Pembrokeshire
Gelliswick Bay	Scientific	Stratigraphy	Pembrokeshire
Landshipping Quay	Aesthetic / Educational / Historical / Scientific	Stratigraphy	Pembrokeshire
The Settlands	Aesthetic / Educational / Historical / Scientific	Stratigraphy	Pembrokeshire
Mascle Bridge Quarry	Scientific	Stratigraphy	Pembrokeshire
Coedcanlas (Llangwm Ferry) Quarries	Scientific	Stratigraphy	Pembrokeshire
Sandy Haven	Historical / Scientific	Stratigraphy	Pembrokeshire
Glen Beach	Historical / Educational / Scientific	Structural Geology / Coastal geomorphology / Economic Geology	Pembrokeshire
Townsend	Scientific	Stratigraphy / Igneous	Pembrokeshire
Sawdern Point	Scientific	Stratigraphy	Pembrokeshire
Picton Point	Scientific	Stratigraphy	Pembrokeshire
Mullock Bridge	Scientific	Quaternary	Pembrokeshire
Pembroke River	Historical / Scientific	Stratigraphy	Pembrokeshire

RIGS	Category	Feature category	Authority
Pennar Point	Scientific	Stratigraphy	Pembrokeshire
West Angle Bay	Educational / Scientific	Stratigraphy / Structure	Pembrokeshire
New Shipping	Scientific	Stratigraphy	Pembrokeshire
Gilman Point	Educational / Scientific	Stratigraphy	Pembrokeshire
Marloes	Scientific	Mineralogy / Structure	Pembrokeshire
Little Haven	Educational / Scientific	Mineralogy / Structure	Pembrokeshire
St Elvis	Historical / Scientific	Mineralogy	Pembrokeshire
Westdale Bay	Scientific	Stratigraphy / Igneous / Structure	Pembrokeshire
Castle Reach (West)	Scientific	Stratigraphy / Igneous	Pembrokeshire
Laugharne	Scientific	Stratigraphy	Carmarthenshire
Longstone Down	Educational / Scientific	Quaternary Geomorphology	Pembrokeshire
Bullslaughter Bay	Scientific	Stratigraphy / Quaternary Geomorphology / Structure	Pembrokeshire
Tar Rocks	Scientific	Stratigraphy / Structure	Pembrokeshire
Musselwick Sands	Scientific	Stratigraphy / Igneous / Structure	Pembrokeshire
New Quay	Scientific	Quaternary Geomorphology	Pembrokeshire
Martin's Haven	Scientific	Igneous	Pembrokeshire
Burton Cliff	Scientific	Stratigraphy	Pembrokeshire
Sma's Wood	Scientific	Stratigraphy	Pembrokeshire
Carew Quarry	Scientific	Stratigraphy	Pembrokeshire
Wear Point	Scientific	Stratigraphy	Pembrokeshire
Monk Haven	Scientific	Stratigraphy / Igneous / Structure	Pembrokeshire
Sandy Haven Pill	Educational / Scientific	Stratigraphy / Structure	Pembrokeshire
St David's Head	Educational / Scientific	Metamorphism / Igneous / Structure	Pembrokeshire
Newgale Beach	Aesthetic / Educational / Scientific	Coastal Geomorphology	Pembrokeshire
Pwll March	Educational / Scientific	Stratigraphy / Quaternary Geomorphology	Pembrokeshire
Pwllderi	Aesthetic / Scientific	Stratigraphy / Igneous	Pembrokeshire
Chapel Point, Caldey			Pembrokeshire
High Cliff, Caldey			Pembrokeshire
Giltar Point	Scientific	Stratigraphy	Pembrokeshire
Priory Bay Sands			Pembrokeshire
Middle Cove	Scientific	Stratigraphy	Pembrokeshire
Stackpole Head	Scientific	Geomorphology	Pembrokeshire
Newport Sands (North)	Scientific	Stratigraphy / Structure	Pembrokeshire
Caerbwdy Bay Quarries	Historical / Scientific	Stratigraphy	Pembrokeshire
Angle Bay	Scientific	Stratigraphy	Pembrokeshire
Gallows Point	Scientific / Educational	Igneous	Mon
Porth Dinllaen	Scientific	Quaternary / Geomorphology	Gwynedd
Trwyn y Tal	Scientific	Quaternary / Geomorphology	Gwynedd

Soils

- 7.2.9 The National Soil Resources Institute (<http://www.landis.org.uk/soilscapes/>) identifies the predominant soil type along much of the West of Wales coastline as freely draining, slightly acid loamy soils with areas of slowly permeable seasonally wet acid loamy and clayey soils along the Llyn Peninsula and Anglesey. In Wales, sediment and gravel, other than that of glaciogenic origin, have predominantly been derived from Lower Palaeozoic and Precambrian shales and slates in the north and west, and mainly Carboniferous limestones in the south.
- 7.2.10 Acidification is a natural process resulting from the loss of nutrient bases (calcium, magnesium and potassium) through the process of leaching and their replacement by acidic elements, such as hydrogen and aluminium. Acidification, as well occurring naturally, is also commonly associated with atmospheric pollution arising from anthropogenically derived sulphur and nitrogen (www.apis.ac.uk). Large areas of Wales are vulnerable to acidification, especially the uplands, as the bedrock is slow weathering and the soils have little or no acid neutralising capacity. It is estimated that 34% of soils in Wales are affected by acidic deposition and in these areas; about 50% of the first to third order streams may have been damaged. In terms of nature conservation, Wales is the worst affected region in the UK with more than 40% of the total area of SSSI potentially damaged by freshwater acidification.
- 7.2.11 Much of the study area remains rural and largely undeveloped. Farming practices (and therefore, soil quality) are subsequently of considerable local importance to the region. **Figure 7.2** presents the agricultural land classification within Wales in terms of its suitability for agriculture (commensurate with the quality of the soils); Grade 1 represents excellent soil and Grade 5, very poor. The West of Wales can be seen to mainly comprise Grades 3 to 5.

Figure 7.1 Key Geological Designations in the West of Wales SMP2 Study Area

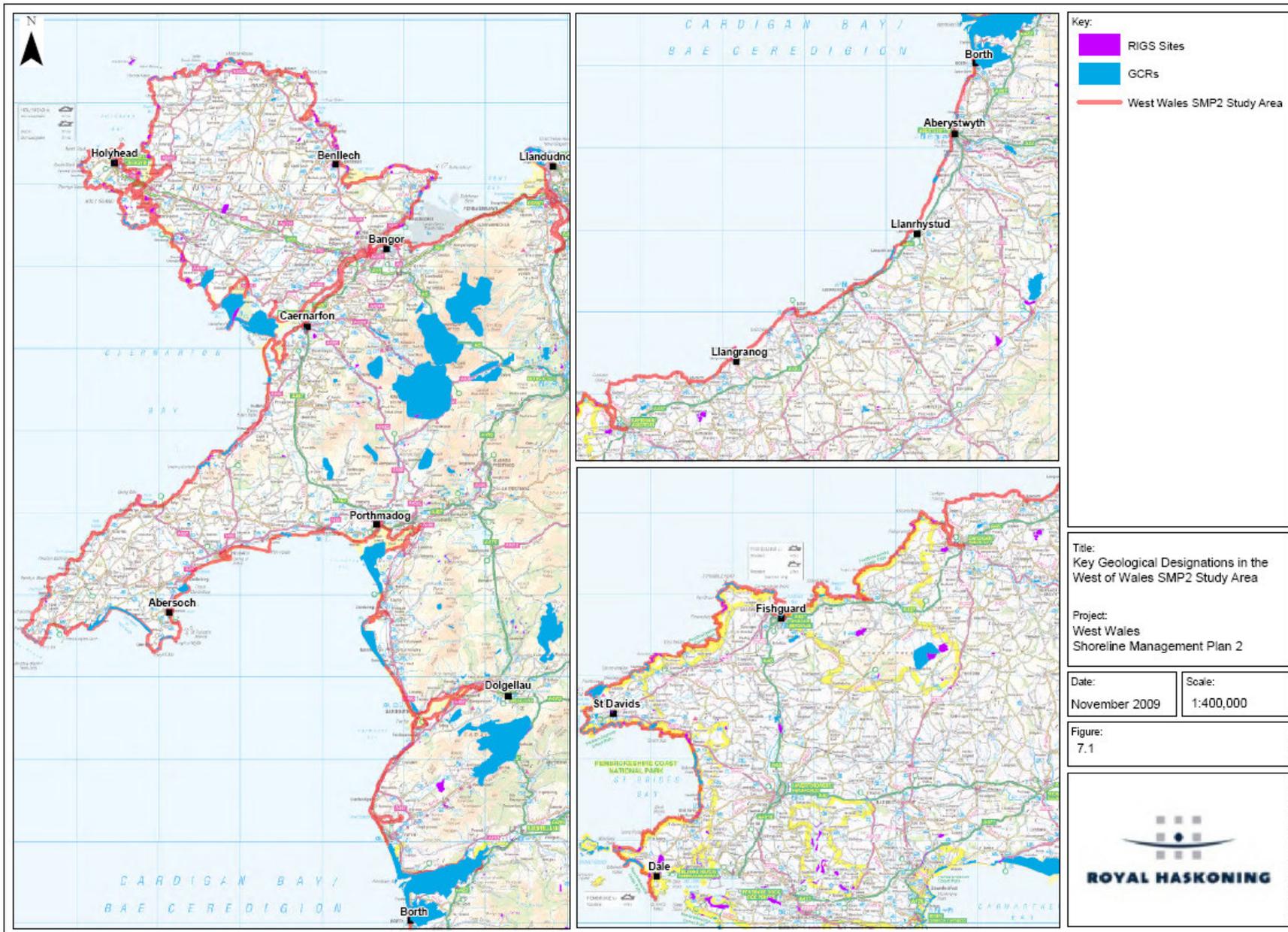
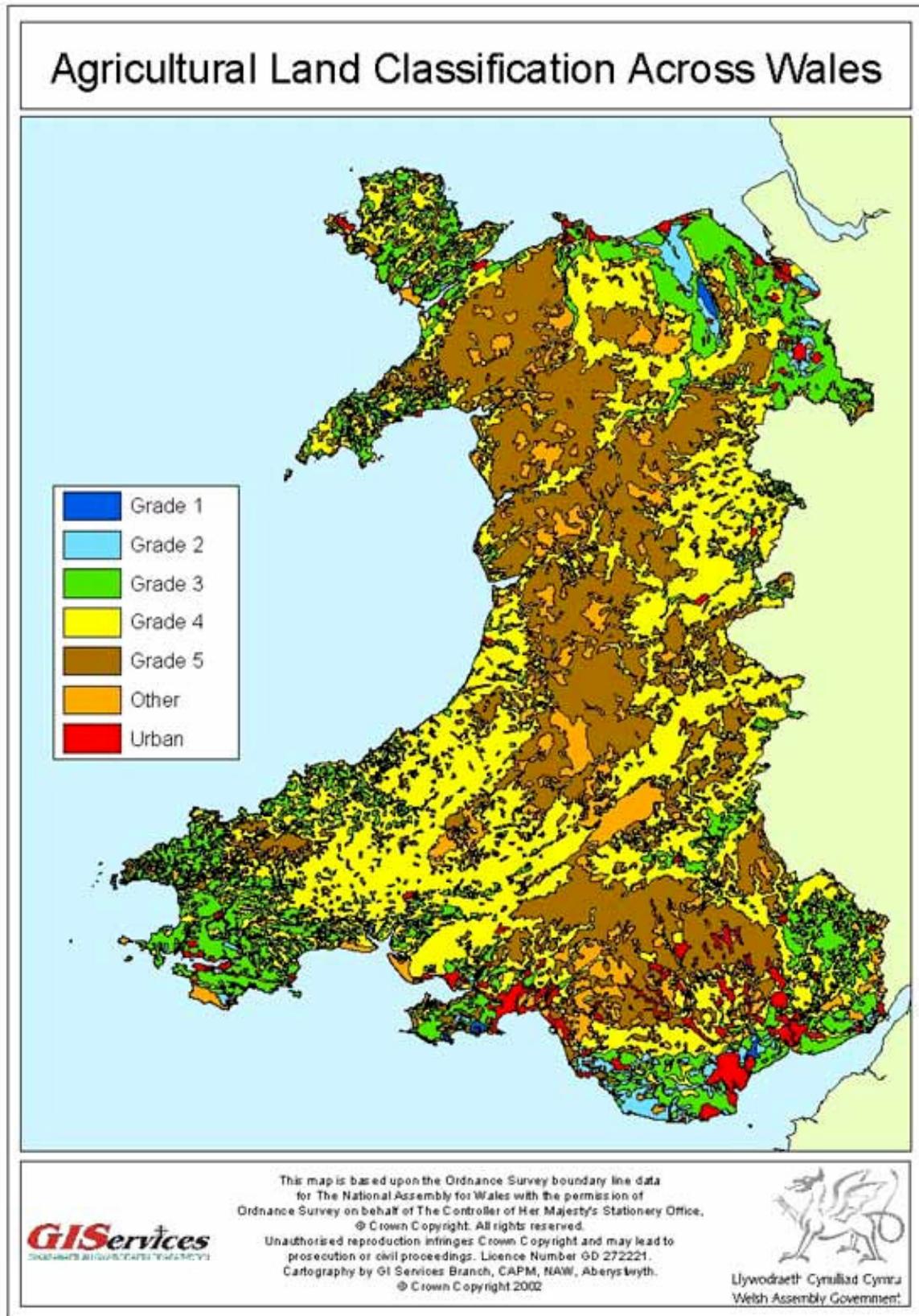


Figure 7.2 Agricultural Land Classification for the West of Wales



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8 COASTAL LANDSCAPES

8.1 Introduction

8.1.1 This section provides an account of the landscape character and designations along the coast within the West of Wales SMP2 study area.

8.2 Overview

Landscape Character

8.2.1 The underlying coastal geology frequently has the most influence on landscape character, affecting the natural habitats, vegetation and biological diversity. Landscape character is also composed of cultural and historical features. The West of Wales coastline is made up of a range of diverse landscapes with a rich diversity of heritage and natural assets, which includes two Areas of Outstanding Natural Beauty (AONB) (**Figure 8.1**).

8.2.2 The landscape area associated with the SMP2 coastline is more aptly described as a 'seascape' which is widely defined as 'an area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land and sea, by natural and/or human factors.' A regional scale seascape assessment study (CCW, 2001) divides the entire coastline of Wales (1,288km) into 50 seascape units, each of which has its own description, focusing on the character of the interaction of land and sea. The work certainly does not replace conventional landscape-based assessment in the coastal zone, but rather adds another dimension to them.

Landscape Designations

8.2.3 The importance of Wales' iconic natural beauty to the country's wealth, health and well-being has been legally acknowledged since 1949. The National Parks and Access to the Countryside Act designated 3 National Parks in Wales and set up what evolved into the Countryside Council for Wales. Welsh landscapes are protected by national law or by local authorities. Those conserved by UK law include: National Parks and AONBs. Other landscapes which are earmarked for sensitive management include Heritage Coasts and Historic Landscapes.

World Heritage Site

8.2.4 Areas of outstanding natural or cultural value can be designated as a World Heritage Site. They can include exceptional examples of outstanding natural habitats, or superlative natural features. A high standard of management is required before listing of the site can be considered. Of the three World Heritage sites in Wales only one occurs in the SMP2 study area (**Table 8.1, Figure 8.1**).

Table 8.1 World Heritage Designations within the SMP2 Study Area

World Heritage Site	Designation description
The Castles and Town Walls of Edward I in Gwynedd	The magnificent and well preserved castles at Beaumaris, Caernarfon, Conwy, and Harlech, with planned defended towns at Caernarfon and Conwy, are outstanding examples of medieval military architecture and planning. Beaumaris and Harlech were built by James of St George, the greatest military engineer of his day, for Edward I, king of England, as part of his campaign to conquer and rule the medieval principality of Gwynedd.

Areas of Outstanding Natural Beauty (AONBs)

- 8.2.5 Areas of Outstanding Natural Beauty (AONBs) are protected because of their special landscape qualities, wildlife, geology and geography. They have more protection than other areas under the planning process and, in terms of landscape and scenery, are equal to National Parks. AONBs are designated under the National Parks and Access to the Countryside Act 1949, amended in the Environment Act 1995. The Countryside and Rights of Way Act 2000 clarifies the procedure and purpose of designating AONBs.
- 8.2.6 There are 40 AONBs in England and Wales (4 wholly in Wales and 1 which straddles the border) and 2 occur within the SMP2 area namely Llyn and Anglesey (**Table 8.2, Figure 8.1**). The primary purpose of the AONB designation is to conserve natural beauty – which by statute includes wildlife, physiographic features and cultural heritage as well as the more conventional concepts of landscape and scenery. Account is taken of the need to safeguard agriculture, forestry and other rural industries and the economic and social needs of local communities. AONBs have equivalent status to National Parks as far as conservation is concerned.

Table 8.2 AONB Designations within the SMP2 Study Area

AONB	Site Designation Area (Hectares)
Llyn	15,860
Ynys Mon / Anglesey	21,999

- 8.2.7 The Llŷn Peninsula or Penrhyn Llŷn in Welsh is renowned for its diverse and interesting coastline and beautiful landscape and this was the basis for its designation in 1957. The AONB encompasses around one quarter of the peninsula - a total of 15,500 hectares, mostly along the coast, but it also extends inland and includes prominent igneous protrusions.
- 8.2.8 The Anglesey AONB is predominantly a coastal designation, covering most of Anglesey's 201 kilometre coastline. The AONB covers approximately 221 sq kms (21,500 hectares) of the Isle of Anglesey and is the largest AONB in Wales.
- 8.2.9 Section 89 (2) of the Countryside and Rights of Way Act 2000 places a statutory obligation on relevant local authorities to: 'prepare and publish a plan which formulates their policy for the management of the area of outstanding natural beauty and for the carrying out of their functions in relation to it'.
- 8.2.10 The purpose of the Management Plan is to recognise the area's special qualities, assess their condition and to try and manage development and future changes for the well-being of those qualities.

National Parks

- 8.2.11 National Parks are designated to protect their special landscape qualities and promote outdoor recreation. National Parks have their own Authorities, which control planning and in the case of those occurring within the SMP2 study area, these authorities are: The Pembrokeshire National Parks Authority and the Snowdonia National Parks Authority.
- 8.2.12 Of the three National Parks occurring in Wales, two connected to the SMP2 study area (**Table 8.3**).

Table 8.3 National Parks Designations within the SMP2 Study Area

National Park	Site Designation Area (Hectares)
Snowdonia	213,933
Pembrokeshire Coast	61,461

Heritage Coasts

8.2.13

Unlike National Parks and Areas of Outstanding Natural Beauty (AONBs), the Heritage Coast designation is non-statutory, and designations can only be made with the agreement of local authorities and land owners. However, the majority of Heritage Coast falls within National Parks, AONBs and the Jurassic Coast World Heritage Site. Heritage Coasts are stretches of outstanding, unspoilt coastline, and the fourteen different stretches in Wales account for nearly half of Wales' coastline and twelve of these occur within the study area (**Table 8.4, Figure 8.1**).

Table 8.4 Heritage Coast Designations within the SMP2 Study Area

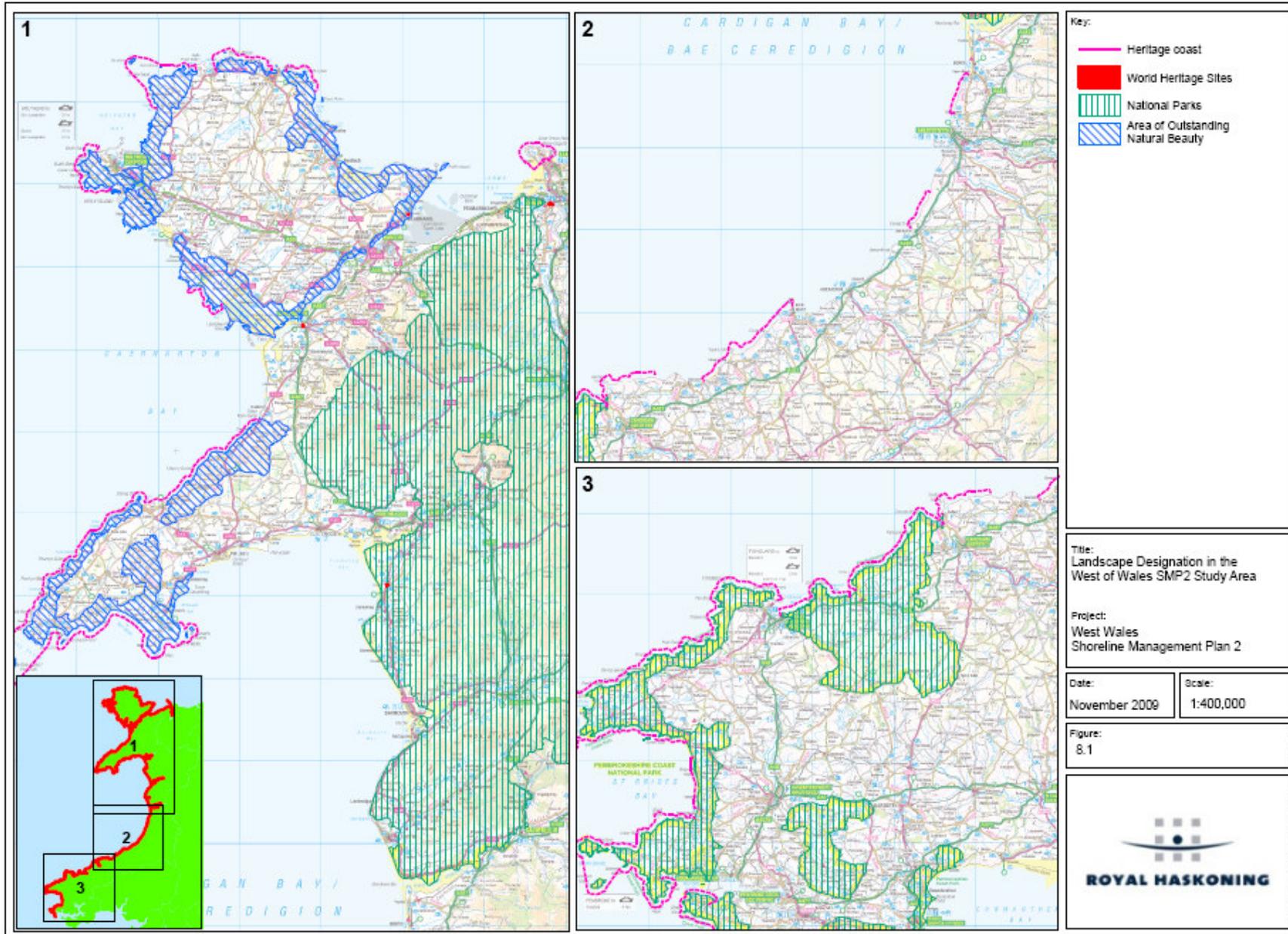
Heritage Coast	Length of coastal designation (km)
Aberffraw Bay	9
Ceredigion Coast	42
Dinas Head	13
Great Orme	13
Holyhead Mountain	13
Llyn Coast	98
Marloes and Dale	47
North Anglesey Coast	36
South Pembrokeshire	60
St.Brides Bay	7
St.David's Peninsula	75
St.Dogmaels & Moylgrove	20

Historic Landscapes

8.2.14

Other landscapes which are earmarked for sensitive management include Historic Landscapes which often show how areas and communities developed over centuries. The best surviving examples have been identified and included on a register. They have no special protection, but the register's aim is to draw attention to the value of these landscapes when planning applications and developments are considered. In addition, CCW consider that all such landscapes worthy of protection in their own right. Historic landscapes date back to prehistoric times and the Mesolithic period when the first small scale land clearances took place. On the coast in Wales, the need to export goods, to fish, to safeguard maritime travel and to defend the land from invasion, have led to distinctive coastal landscapes which include ports, docks, lighthouses and harbours, as well as airfields and the remarkable set of nineteenth-century forts at Milford Haven. Historic landscapes are covered in more detail in **Section 10** - Historic Environment.

Figure 8.1 Landscape Designations in the West of Wales SMP2 Study Area



9 BIODIVERSITY

9.1 Introduction

9.1.1 This section provides an account of the nature conservation and biodiversity interests along and adjacent to the coast within the West of Wales SMP2 study area.

9.2 Overview

Designations

9.2.1 Wales is blessed with an exceptional diversity of habitats and the flora and fauna include many distinctive species. Many of these species and habitats are of national, European or international importance and much of the coastal landscape and its biodiversity are important to the local economy. The high quality of the biodiversity along the Welsh coastline is reflected in the high proportion of European or internationally recognised sites that cover large areas of sea and coast.

9.2.2 Protected sites in Wales can be broadly categorised as:

- Special sites protected under UK law - Sites of Special Scientific Interest (SSSIs) and Marine Nature Reserves (MNRs);
- Natura 2000 sites protected under European Commission Directives – Special Areas of Conservation (SAC) and Special Protected Areas (SPAs);
- Special sites protected under international agreements – Wetlands of International Importance (Ramsar sites), Biosphere Reserves and Biogenetic Reserves; and
- Other special sites – National Nature Reserves (NNRs) and Local Nature Reserves (LNRs).

9.2.3 An overview summary of the designation and reserves present within West of Wales are presented in **Table 9.1**.

Table 9.1 West of Wales SMP2 Site Designations and Reserves

Site Designation Area (Hectares)	Site Designation Area (Hectares)
RAMSAR sites	653
Special Protection Area EU Habitats Directive (SPA)	176,209
Special Area of Conservation EU Habitats Directive (SAC)	488,530
SSSIs	40,466
National Nature Reserves	6,027
Marine Nature Reserves	1,324
Local Nature Reserves	3,359

Statutory International Designations - Habitats & Species

Special Conservation Areas (SACs) and Special Protection Areas (SPAs)

- 9.2.4 The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, transposed into UK law by the Conservation (Natural Habitats) Regulations 1994 ('the Habitats Regulations') has resulted in the identification of several Special Areas of Conservation (SACs) along the length of the SMP2 coastline. The Council Directive 79/409/EEC on the conservation of wild birds ('The Birds Directive') is implemented in the UK through the Wildlife and Countryside Act 1981 as amended, and provides for the identification of Special Protection Area (SPAs).
- 9.2.5 The EC Habitat Regulations apply to both SAC's and SPA's and strengthen the protection afforded to sites by the Wildlife and Conservation Act of 1981, as amended, by making illegal any damage to breeding sites or nesting places of protected species. In accordance with TAN 5 Nature and Conservation Planning (2009) Ramsar sites and pSPAs should also be subject to the provisions of the Habitats Regulations. Any development within the meaning of the Conservation (Natural Habitats etc) Regulations 1994 which is likely to affect an SPA, SAC, Ramsar or pSPA will not be permitted, unless the relevant 'competent authority' has decided, on completion of an 'appropriate assessment', that there are no alternative solutions and that the development must be carried out for imperative reasons of overriding public interest.
- 9.2.6 Approximately 70% of the Welsh coastline and many of its estuaries are designated as Special Areas of Conservation (SAC) and/or Special Protection Areas. SACs form a network of strictly protected sites across the European Union and make an important contribution to protecting important habitat types and species. There are 90 SACs or candidate SACs in Wales of which 31 occur in the West of Wales SMP2 study area and these are detailed in **Appendix C** and comprise:
- Dee Estuary;
 - River Dee and Bala Lake;
 - Afon Eden;
 - Y Fenai a Bae Conwy / Menai Strait and Conwy Bay;
 - Afonydd Cleddau / Cleddau Rivers;
 - Afon Gwyrfai a Llyn Cwellyn;
 - Afon Teifi/ River Teifi;
 - Cardigan Bay / Bae Ceredigion;
 - Clogwyni Pen Llyn / Seacliffs of Llyn;
 - Pembrokeshire Marine / Sir Benfro Forol;
 - Bae Cemlyn / Cemlyn Bay;
 - Carmarthen Bay Dunes / Twyni Bae Caerfyrddin;
 - Coedwigoedd Penrhyn Creuddyn / Creuddyn Peninsula Woods;
 - Cors Fochno;
 - Glan-traeth;
 - Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh;
 - Glannau Ynys Gybi / Holy Island Coast;

- Great Orme`s Head / Pen y Gogarth;
- Limestone Coast of South West Wales / Arfordir Calchfaen de Orllewin Cymru;
- Llyn Dinam;
- Morfa Harlech a Morfa Dyffryn;
- Pembrokeshire Bat Sites and Bosherton Lakes / Safleoedd Ystlum Sir Benfro a Llynno;
- St David`s / Ty Ddewi;
- Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dunes;
- Coedydd Aber;
- Corsydd Llyn / Lleyn Fens;
- North West Pembrokeshire Commons / Comins Gogledd Orllewin Sir Benfro;
- Pen Llyn a`r Sarnau / Lleyn Peninsula and the Sarnau;
- Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd;
- Glynllifon; and
- Coedydd Derw a Safleoedd Ystlumod Meirion / Meirionnydd Oakwoods and Bat Sites.

9.2.7 Special Protection Areas (SPAs) aim to safeguard rare, vulnerable and migratory birds according to the European Commission`s Birds Directive. Wales has 19 SPAs which are all SSSIs and protected as such. There are a total of 15 SPA sites occurring within the SMP2 study area and a further proposed SPA along the Anglesey and north Wales coastline (Liverpool Bay). The SPAs within the SMP2 study area are presented in detail in **Appendix C** and comprise:

- Bae Caerfyrddin / Carmarthen Bay
- Burry Inlet
- Dee Estuary
- Grassholm
- Castlemartin Coast
- Dyfi Estuary / Aber Dyfi
- Glannau Aberdaron and Ynys Enlli / Aberdaron Coast and Bardsey Island
- Glannau Ynys Gybi / Holy Island Coast
- Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal
- Ramsey and St David's Peninsula Coast
- Skokholm and Skomer
- Traeth Lafan / Lavan Sands, Conway Bay
- Ynys Feurig, Cemlyn Bay and The Skerries
- Ynys Seiriol / Puffin Island
- Liverpool Bay / Bae Lerpwl

Ramsar Sites

- 9.2.8 Wetlands of International Importance or Ramsar Sites after the town in Iran where an international convention was agreed to protect important and threatened wetlands, which can vary from bogs and mires to open water. At the end of 2000 there were 10 Ramsar sites in Wales covering over 30,861 ha all of which are also SSSIs and contain rare plants, animals and many are particularly important for wildfowl. The 10 Ramsar Sites in Wales are all SSSIs and contain rare plants and animals. Many are particularly important for wildfowl.
- 9.2.9 There are three Ramsar sites occurring within the study area. One is Cors Fochno and Dyfi which is of international importance for having one of the largest active raised mires in the UK. The geomorphology, flora and invertebrate faunas are of national importance. The site supports the only regular wintering flock of Greenland white-fronted geese in England and Wales, and is a key site in Wales for breeding waders. Cors Fochno (also known as Borth Bog) lies on the south side of the Dyfi estuary and also forms a component part of the Dyfi Biosphere Reserve. The other two Ramsar sites are Anglesey and Llyn Fens, and the Dee Estuary. The key features of these sites are presented in **Appendix C**.
- 9.2.10 The current Planning Guidance (Wales): Planning Policy and Technical Advice Note (Wales) 5 extends the same protection at a policy level to listed Ramsar sites in respect of new development as that afforded to sites which have been designated under the Birds and Habitats Directives as part of the European Union (EU) Natura 2000 network. As such Ramsar sites are assessed under the same criteria when undertaking Habitat Regulations Assessment.

Biosphere Reserves

- 9.2.11 Wales has one of these internationally recognised biosphere reserves (Dyfi) which are dedicated to studying the way human activity affects the local environment and is only the second in the UK. It is part of a world wide chain under UNESCO.

Biogenetic Reserves

- 9.2.12 Biogenetic Reserves form a European network of reserves to conserve plants, animals and natural areas that may be common in one country, but scarce in another. They aim to protect a store of such genetic material for the future. Sites have to be SSSIs or similar. Wales has only one biogenetic reserve and none occur within the SMP2 study area.

National Designations

Special Sites of Scientific Interest (SSSIs)

- 9.2.13 The West of Wales coastline also contains several sites designated under national legislation and the principal national designation of ecological importance is Site of Special Scientific Interest (SSSI) which form the cornerstones of wildlife and habitat protection in Wales. There are more than 1,000 SSSIs in Wales and 43,544 ha of Wales's SSSI (17% of the total by area) are on seashores and estuaries below the mean high water mark and the majority of which are in the intertidal zone. The intertidal zone in Wales is approximately 56,848 ha in total, of which 77% is designated as SSSI (CCW, 2006). There are 160 SSSIs occurring within the study area and their features and favourable status are detailed in **Appendix D**.

- 9.2.14 CCW designates SSSI's as being "of special interest by reason of flora, fauna, or geological or physiographical features (see **Section 7**). SSSI's represent areas of national importance to nature conservation in the United Kingdom. Many SSSIs support wildlife and habitats of international importance, and are therefore also designated as, for example, Special Areas of Conservation (SAC) or Special Protection Areas (SPA). Others are National Nature Reserves, giving them recognition as the very best examples of biodiversity and geological heritage in the UK.
- 9.2.15 All public authorities along the coastline of the study area, including local planning authorities, have a duty under the amended Wildlife and Countryside Act 1981 to further and enhance the nature conservation interests of these sites whilst carrying out their statutory functions. This should be achieved by consulting the relevant government nature conservation advisors (in this case CCW) for advice on whether a proposed licence or work to be undertaken directly for the authority is likely to harm the SSSI interests. If the advice is not followed, the authority must provide reasons for this in writing to the Secretary of State, and make good any damage to the site.
- 9.2.16 **Table 9.2** describes of the SSSI designations in the study area and their favourable status and **Figures 9.1 – 9.2** show where these sites are located.

Table 9.2 Table-Map of West of Wales showing the main salmon rivers and denoting those with Salmon Action Plans (*) and those designated as Special Areas of Conservation (\$) in which salmon must be maintained or restored to favourable conservation status. Table denotes current compliance against the management objective and predicted compliance in 2013.

River	Current compliance	Predicted 2013 compliance
43 Taf	P A R	P A R
44 E & W Cleddau	A R	P A R
45 Nevern	P A R	P N A R
46 Teifi	P N A R	P N A R
47 Aeron		
48 Ystwyth		
49 Rheidol	A R	P A R
50 Dyfi	P A R	P N A R
51 Dysynni	A R	A R
52 Mawddach & Wnion	A R	A R
53 Artro		
54 Dwryyd	P N A R	P N A R
55 Glaslyn	P A R	P N A R
56 Dwyfach & Dwyfawr	A R	A R
57 Llyfni		
58 Gwyrfai		
59 Seiont	P N A R	P N A R
60 Ogwen	N A R	P N A R
61 Conwy	N A R	N A R

Key to compliance assessments: NAR - 'Not At Risk'; PNAR - 'Probably Not At Risk'; PAR - 'Probably At Risk'; AR - 'At Risk'. Based on provisional 2008 data.

Source: Cefas and Environment Agency, 2009.

National Nature Reserves (NNRs)

9.2.17 National Nature Reserves (NNRs) are designated by CCW under the National Parks and Countryside Act 1949. There are 71 NNR in Wales and 10 occur within the study boundary (**Table 9.3**). National Nature Reserves (NNRs) are the very best examples of wildlife habitats and sites and may include interesting geological features.

Table 9.3 National Nature Reserves (NNRs) within the West of Wales SMP2 Study Area

Site name	Area (Ha)
Coed Dolgarrog	69
Coedmor	46
Dyfi	2282
Morfa Dyffryn	197
Morfa Harlech	878
Newborough Warren And Ynys Llanddwyn National Reserve	1551
Ramsey Island	280
Skomer Island	314
Stackpole	232
Ynys Enlli	178

9.2.18 15% of the NNR area is permanently or temporarily underwater, being below the coastal mean high water mark. This includes seashores, smaller estuaries and some sub-tidal channels. However, NNRs are not used to protect important sub-tidal marine sites - this is the role of Marine Nature Reserves (MNRs).

Marine Nature Reserves (MNRs)

9.2.19 The Skomer Marine Nature Reserve (MNR) covers an area of 1,324 ha and is Wales' only MNR and one of only three in the UK. MNRs protect important marine habitats, sea life and special features on shore or on the seabed. The reserve completely surrounds the islands of Skomer and Middleholm and encompasses the mainland coastline around the end of the Marloes peninsula, including the small bay of Martin's Haven. The Wildlife and Countryside Act 1981 empowers CCW to apply to the First Minister for the National Assembly for Wales (NAW) to designate MNR. To give some protection, MNR may be governed by byelaws, created through discussions and mutual agreements with all concerned, and approved by NAW.

Local Nature Reserves (LNRs)

9.2.20 Local Nature Reserves (LNRs) are designated under Section 21 of the National Parks and Access to the Countryside Act 1949 and are set up by local authorities and have features which are important locally. They combine conservation with opportunities for quiet enjoyment of nature. Of the 53 in Wales, 20- occur within 1km of the study area (**Table 9.4**).

Table 9.4 Local Nature Reserves (LNRs) within the SMP2 Study Area

Site code	Local Nature Reserve Name	Area (Ha)
2296	Foryd Bay	304
2938	Bodlondeb Woods	8
2281	Bryn Euryn	24
1737	Coed Cynol	5
2922	Cytir Mawr	6
2802	Fairy Glen	3
2930	Freshwater East	41
2301	Great Orme's Head	183
2307	Kinmel Dunes	7
2642	Llanddona Common	16
2308	Lon Cob Bach	12
2643	Mynydd Marian	11
2314	Parc Y Borth	7
2318	Pen Y Banc	20
2316	Pendinas	40
2317	Penglais	11
2320	Pwllcrochan Woods	20
2324	Traeth Lafan	2627
2931	Trwyn Yr Wylfa / Wylfa Head	13
2937	Upper Dingle Woods	1

Biodiversity Action Plan (BAP) Habitats and Species

- 9.2.21 The 1994 UK Biodiversity Action Plan was published by the UK Government in response to the 1992 United Nations Convention on Biological Diversity. A unique feature of the plan is that it identifies actions to be taken by a wide range of statutory and non-statutory bodies working in partnership. Some actions are taken forward geographically by local Biodiversity Action Plan partnerships; others on a UK-basis for particular habitats and species; and others by bodies with particular responsibilities, such as the Forestry Commission or Environment Agency. The spirit of the plan is very much one of cooperation and concerted action, with partners at all levels being called upon to participate in the development of policies and strategies for biodiversity conservation.
- 9.2.22 The Western Wales coastline supports a number of priority species listed in the UK Biodiversity Action Plan, a number of which are water related such as Allis and Twaite shad. Salmon and otter are Habitats Directive Annex II species and important indicator species for healthy rivers and ecosystems. Otter populations are currently increasing in Wales.
- 9.2.23 The key priority habitats for the SMP2 study area potentially affected by policy plans are detailed below.

Wetland:

- Blanket bog;
- Eutrophic standing waters;
- Wet woodland;
- Fens; and
- Reedbeds.

Coastal and Marine:

- Coastal sand dunes;
- Coastal and floodplain grazing marsh;
- Coastal sand dunes;
- Coastal vegetated shingle;
- Fens;
- Lowland heathland;
- Maritime cliff and slopes;
- Mudflats;
- Reedbeds;
- Saline lagoons; and
- Seagrass beds.

9.2.24 Coastal squeeze of BAP habitats in the West of Wales including coastal saltmarsh, mudflats and coastal sand dunes is of major concern for the WAG, Environment Agency and Local Authorities. An example of a key site in the West of Wales under threat from rising sea levels and changes in coastal habitat in response to coastal squeeze is Cemlyn lagoon (see **Plate 2**).

Coastal and Freshwater Fisheries

9.2.25 The coastline along West of Wales is generally very rugged, with extensive sandy beaches only near estuaries and in sheltered bays. As a consequence, marine fisheries are restricted by prevailing westerly weather during the winter. The majority of boats fish within 6 miles of the coast, potting for lobsters, crabs and whelks and netting for flatfish, cod, bass, mullet, herring, salmon and sea trout (Walmsley and Pawson, 2007). Some boats >10m use otter trawls for white fish. Fishing activity within the 6nm limit is regulated by the South Wales Sea fisheries Committee and North Western and North Wales Sea Fisheries Committee.

9.2.26 There are also areas around the Welsh coast that are important for shellfish populations. There are currently 26 shellfish waters within the Western Wales. The Menai Straits has the UK's largest cultivated mussel fishery and cockles are gathered by hand from many estuaries, both species having received greater attention as marketing opportunities improved. Water quality of these coastal waters is obviously critical to the success of these inshore fisheries and mollusc harvesting areas.

- 9.2.27 There has been a long history of scallop dredging in Welsh waters, with evidence of this particular fishery being actively fished for over 30 years, but the availability of the stock has varied over that time and the methods used to harvest scallops are destructive. They involve pulling heavy metal frames through the seabed surface to dislodge scallops into the water and into attached nets behind. The number of boats operating has grown rapidly along the West of Wales and so has their power and the number of dredges that are pulled. With large numbers of boats operating for many hours a day, the damage to the marine environment is potentially significant. For example, a dispute (in May 2009) over scallop-dredging in Cardigan Bay occurred after fisheries regulators ignored a demand by the Welsh Assembly's wildlife advisers for an immediate and total ban in areas protected by European conservation legislation, due to the potentially disturbing activity affecting dolphins and seals, as well as damaging or destroying their habitats and breeding sites.
- 9.2.28 The ports of Milford Haven and Holyhead are the centres of commercial sea fishing in Wales, although many smaller vessels operate from many of the estuaries and smaller ports around the coastline.
- 9.2.29 Recreational sea angling also takes place along much of West of Wales' coastline with nearly 300 charter boats operating from Welsh ports. Recreational fisheries in Wales provide significant opportunities for developing rural economies and for a significant proportion of tourist visiting Wales form part of their reason for visiting. The coastal and freshwater systems of Wales are important for a number of migratory species, such as salmon, sea trout and eels which are of value to the recreational angling industry. The rivers of western Wales are important for salmonids with over 240 salmon and trout fishing rivers. Welsh rivers account for more than half of the sea trout caught in England and Wales.
- 9.2.30 Wales, with its large numbers of salmon and trout rivers and its varied coastline, has seen the historic development of a number of differing fishing methods in addition to the use of rod and line. These methods, suited to local conditions, have been used over the centuries to catch salmon and sea trout (sea trout) and have included the use of coracles, lade nets, putchers, wade nets and draft seines to name but a few. Traditionally these methods have supplied many communities with both a food source and employment. Due to many reasons, salmon stocks have declined and legislation to prevent over-exploitation, including the closure of mixed stock fisheries (fisheries that exploit fish from more than one river system) has meant that many fisheries no longer operate and commercial catches in Wales have reduced dramatically in the last few years with a 53% reduction between 2003-2008 (Cefas and Environment Agency, 2009). The Environment Agency Wales has prepared a series of action plans, based on river catchments, setting out what needs to be done to support and restore salmon populations. A map of the principal salmon rivers in Wales for which data is present is given in **Table 9.4** which also outline current compliance against the management objective and predicted compliance in 2013.
- 9.2.31 Commercial fisheries for other species such as yellow and silver eel also exist along the West of Wales coastline. The eel fishery was first licensed in 1986 with catches generally comprising less than 1% of the total declared catch in England and Wales (Environment Agency, 2008). Recent declines in eel recruitment have led to the establishment of an Eel Management Plan for the Western Wales River Basin District (RBD) which aims to describe the current status of eel populations, assess compliance with the target set out in Council Regulation No 1100/2007 and detail management measures to increase silver eel escapement.

Figure 9.1 Internationally Important Nature Conservation Sites in the West of Wales SMP2 Study Area

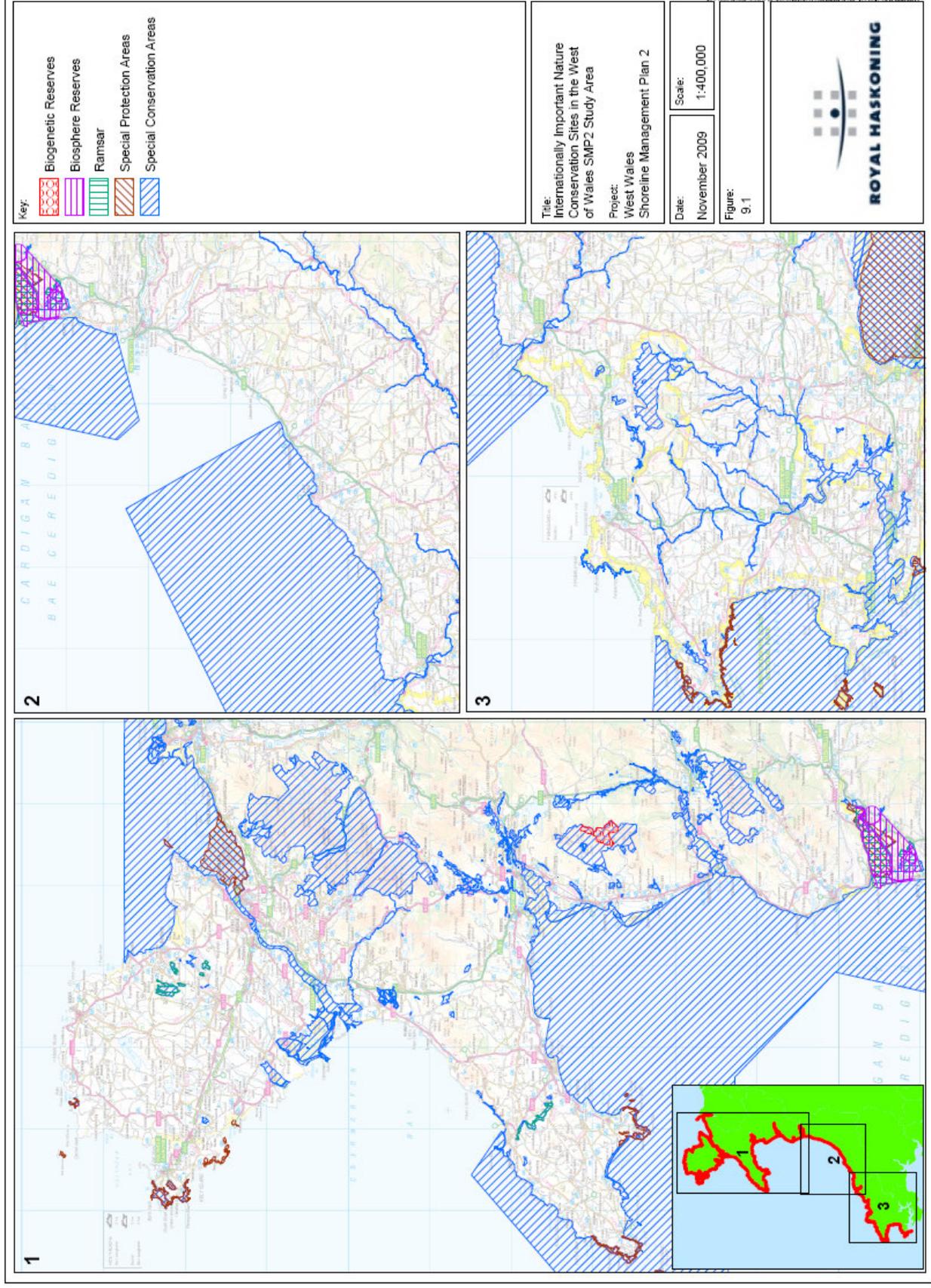
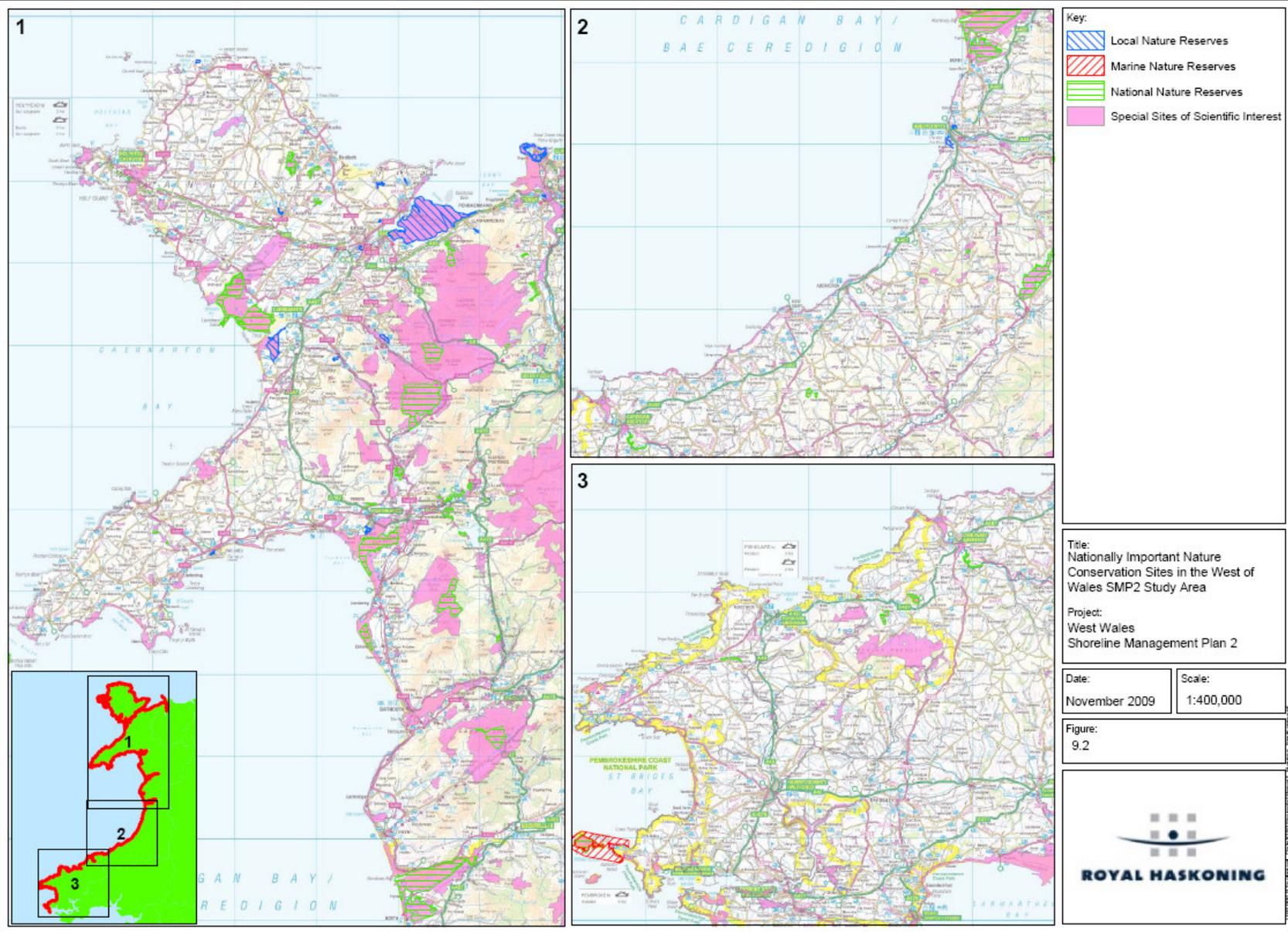


Figure 9.2 Nationally Important Nature Conservation Sites in the West of Wales SMP2 Study Area



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10 THE HISTORIC ENVIRONMENT

10.1 Introduction

10.1.1 This section provides an account of the historic environment along the coast within the West of Wales SMP2 study area. It covers archaeological sites and prehistoric land surfaces to modern day (WWII) structures.

10.2 Overview

Description

10.2.1 Visiting a heritage site is amongst one of the most popular activities undertaken by visitors to the Welsh seaside. Virtually every mile of the coast of Wales bears the traces of Welsh history from prehistoric burials and forts to the coastal defences of the Napoleonic Wars and World War II. Some of the most enduring and iconic coastal images owe their drama and magic to the historic environment from prehistoric Carreg Samson in Pembrokeshire, to Harlech Castle and Llandudno Pier. The castles of Edward I in North Wales are one of only two World Heritage Sites in Wales and are visited by half a million people a year.

10.2.2 The coastal historic environment comprises a wide range of sites, structures and landscapes. These include:

- Buildings;
- Palaeolithic deposits;
- Post-glacial (Holocene) prehistoric archeological sites;
- Peat deposits;
- Wood and timber structures;
- Shell middens;
- Salterns;
- Sea-walls; and
- Wrecks, hulks and aircraft.

10.2.3 The Historic Environment also comprises entire landscapes. Parks, gardens, and battlefields are obvious examples; but many landscapes are the product of human land use and planning over thousands of years.

Designated Sites and Monuments

10.2.4 Only a very small proportion of recognised and recorded historic assets (less than 5%) have any form of statutory protection and many more archaeological sites perhaps the majority remain undiscovered. Designated sites include:

- **Scheduled Monuments (SMs)** designated under the Ancient Monuments and Archaeological Areas Act 1979;
- **Historic shipwrecks** designated under the Protection of Wrecks Act 1973; and
- **Listed Buildings and Conservation Areas** designated under the terms of the Town and Country Planning Act 1990. Listed buildings are graded I, II*, or II.

- 10.2.5 Other historic sites, including World Heritage Sites (which are also SMs), historic parks and gardens and historic battlefield sites are included within non-statutory registers, which underline the need to consider their special importance within the planning process, when development is proposed. Cadw is the Welsh Assembly Government's historic environment service. Its objectives are to protect, conserve and sustain the historic environment of Wales. This includes the scheduling of ancient monuments and listing of historic buildings.
- 10.2.6 The amount of information available on historic landscapes within Wales is increasing rapidly. The four Welsh Archaeological Trusts maintain the regional Sites and Monuments Records (SMRs) for their areas. The main trusts of relevance to the study area are; Dyfed Archaeological Trust, Gwynedd Archaeological Trust and Clwyd / Powys Archaeological Trust. Within the areas covered by the Trusts and in the SMP2 study area there are 20 historic landscapes out of a total of 58 in Wales.
- 10.2.7 The Countryside Council for Wales is the statutory adviser to government on sustaining natural beauty, wildlife and the opportunity for outdoor enjoyment throughout Wales and its inshore waters. It is a partner with Cadw and ICOMOS (UK) in maintaining the Register of Landscapes of Historic Interest in Wales and in partnership with the Welsh local authorities has developed LANDMAP, a landscape assessment methodology for Wales (see p. 22). The Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) is the national body of survey and record. It compiles and makes available a comprehensive archive of ancient monuments and historic buildings – the National Monuments Record (NMR) for Wales.

World Heritage Site

- 10.2.8 World Heritage Sites are places or buildings of outstanding universal value. UNESCO's World Heritage mission is to encourage countries to ensure the protection of their own natural and cultural heritage. Examples of World Heritage Sites within the SMP2 study boundary include the Castles and Town Walls of King Edward in Gwynedd and the Blaenavon Industrial Landscape.

Protected Wrecks

- 10.2.9 Protected Wrecks are protected by UK legislation which includes; the Protection of Wrecks Act 1973, Protection of Military Remains Act 1986 and the Ancient Monuments and Archaeological Areas Act 1979. Wrecks in Wales fall under the authority of Cadw.
- 10.2.10 There are four wrecks protected under the Protection of Wrecks Act 1973 in the SMP2 study area and these are detailed in **Table 10.1** and shown in **Figure 10.1**.

Table 10.1 Protected Wreck Sites in the West of Wales SMP2 Study Area

Protected Wreck	Location	Year wrecked	Authority
SS Castilian	Anglesey	1943	MCA
Tal-Y-Bont	Cardigan Bay	1677	Cadw
Royal Yacht Mary	The Skerries, Anglesey	1675	Cadw
Pwll Fanog	Menai Strait	Medieval	Cadw

Scheduled Ancient Monuments

- 10.2.11 Scheduled Ancient Monuments (SAMs) are defined in the Ancient Monuments and Archaeological Areas Act 1979. Cadw is the Welsh Assembly Government's historic environment service and responsible for designating SMs in Wales. Over 4,000 SAMs are present within Wales, with 308 identified within the study area and are considered to be of national importance (**Figure 10.1**). Occasionally SMs are also designated as listed buildings, although the latter designation is generally only applied to buildings and structures which are or could be used in modern day-to-day use. Damage to a SAM is a criminal offence and any works taking place within one requires Scheduled Monument Consent from the Secretary of State or the devolved equivalent.

Historic Parks and Gardens

- 10.2.12 In Wales, Cadw is the agency responsible for the Cadw/ICOMOS Register of Parks and Gardens of Special Historic Interest in Wales. There are currently 372 sites on the Register. There are 15 such sites contained within SMP2 study area.

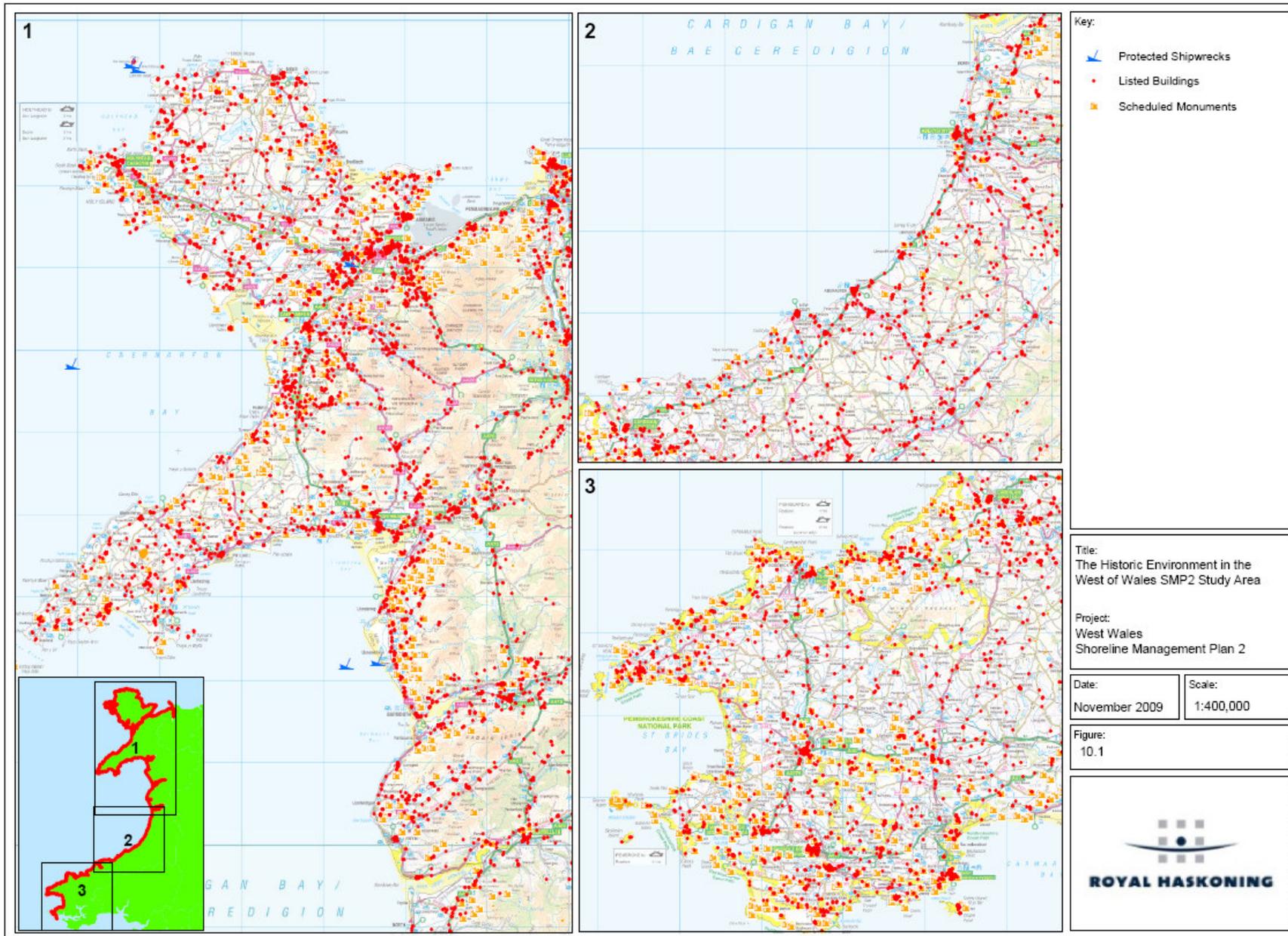
Listed Buildings

- 10.2.13 A listed building is a building or other structure officially designated as being of special architectural, historical or cultural significance and may not be demolished, extended or altered without special permission from the local planning authority. In Wales the authority for listing is granted by the Planning (Listed Buildings and Conservation Areas) Act 1990 and is administered by Cadw. There are over 30, 000 listed buildings distributed throughout Wales of which there are 4,061 located within the SMP2 coastal study area, and these are presented in **Figure 10.1**.

Conservation Areas

- 10.2.14 There are many distinct settlements along the Welsh coastline which have strong distinctive character, encompassing traditional architecture build forms as well as more formal approaches. There are Conservation Areas at the historic cores of many of the coastal towns which provide a rich and varied tapestry, defining the building traditions of the past. Conservation areas are designated by local planning authorities as areas of special architectural or historic interest. Conservation areas vary greatly in their nature and character. They range from the centres of our historic towns and cities, through fishing and mining villages, 18th- and 19th-century suburbs, model housing estates, and country houses set in their historic parks, to historic transport links and their environs, such as stretches of canal. There are 28 conservation areas within the SMP2 study area.

Figure 10.1 The Historic Environment in the West of Wales SMP2 Study Area



11 MATERIAL ASSETS

11.1 Introduction

11.1.1 This section provides an account of the material assets along the coast within the West of Wales SMP2 study area. It covers community assets, infrastructure and critical infrastructure. These assets bind the land use and settlement to their locations.

11.2 Overview

Main Urban Centres and Community Assets

11.2.1 There are two cities in the SMP2 study area, Bangor and St David's (**Table 4.1**) and the majority of the larger coastal towns are located in northern Wales such as Colwyn Bay, Llandudno and Aberystwyth. The size of these urban centres also dictates the distribution and abundance of community assets including schools, care homes and hospitals (**Figure 11.1**).

Ports and Harbours

11.2.2 *Catching the Wave* (August 2004) identified eleven marinas around the coast of Wales and some twenty three harbours (plus six commercial harbours and fifteen yacht stations). The **Table 11.1** below describes the marinas and moorings along the coastline and identifies whether they are susceptible to erosion and are replaceable. The table does not describe slipways, beach, bay or estuary moorings or access points. Key sites which have also been affected by siltation and dredging include Caernarfon Harbour, Deganwy Marina, Holyhead Harbour, Fishguard Harbour, Port Dinorwic Harbour, Conwy Marina, Aberystwyth Harbour and Pwllheli Harbour.

11.2.3 The main commercial ports are those of Holyhead, Fishguard and Milford Haven which are accessed by good road and rail networks (**Figure 11.2**). Of these Milford Haven plays an important role as part of the Trans-European Network connecting the Republic of Ireland, the UK and mainland Europe. Milford Haven is the forth largest port in the UK in terms on tonnage and the busiest for oil products, a sector set to grow following completion of the Liquefied Natural Gas (LNG) terminal and supply line. The ports of Holyhead, Figuard and Milford Haven (Pembroke Docks) also provide important passenger transport and freight (roll-on roll-off) services to Ireland. Of these Holyhead is the third largest passenger ferry port in the UK (WAG, 2008a, b).

Table 11.1 Numbers and types of marinas and moorings within the West of Wales SMP2 study area and susceptibility to erosion

Marina & Mooring Name	Type	No.	Affected by Erosion	Replaceable
Caernarfon Harbour	Built harbour/marina	50	Yes	Yes
Deganwy Marina	Built marina	100	Yes	Yes
Porthmadog Harbour Estuary	Estuary moorings and quayside	130	Yes	Yes
Seiont Moorings and Quayside	Estuary moorings and quayside	90	No	Yes
Aberdovey Pier and Estuary Moorings	Estuary moorings and slipways	70	Yes	Yes
Holyhead Harbour	Fishing Harbour	5	Yes	Yes
Amlwch Harbour	Harbour	24	Yes	Yes

Marina & Mooring Name	Type	No.	Affected by Erosion	Replaceable
Fishguard Harbour	Harbour	80	Yes	Yes
Porthclais Harbour	Harbour	25	Yes	Yes
Porthgain Harbour	Harbour	1	Yes	Yes
Towyn Harbour	Harbour	30	Yes	Yes
Traeth Bychan Harbour	Harbour	22	Yes	Yes
Bangor Marina/Quay	Hard standing and launch/slip	130	Yes	Yes
Unnamed boat park and ramp	Hard standing and launch/slip	45	Yes	Yes
Port Dinorwic Harbour	Lock with harbour/canal	55	No	Yes
Conwy Marina	Marina	390	Yes	Yes
Aberaeron Harbour	Marina & estuary mooring	70	Yes	Yes
Holyhead Beach and Marina Moorings	Marina & estuary mooring	290	Yes	Yes
Aberystwyth Harbour	Marina & estuary mooring	160	Yes	Yes
Fort Belan Marina	Marina & estuary mooring	25	Yes	Yes
Pwllheli Harbour	Marina & estuary mooring	430	Yes	Yes
Shell Island Marina	Marina & estuary mooring	70	Yes	Yes
Y Felinheli Marina	Marina and quayside	80	Yes	Yes
Porth Penrhyn	Marina/Quay	70	Yes	Yes
Morfa Nefyn	Moorings and standings	20	Yes	Yes
Menai Strait opposote Brynsiencyn	Moorings in the Menai Strait	30	Yes	Yes
Roman Camp Mooring Bangor	Moorings in the Menai Strait	30	No	Yes
Portdinorwic Marina Felinheli	Moorings in the Menai Strait, with boat park and launching ramp	80	No	Yes
Trefor Pier	Moorings sheltered	15	No	Yes
Menai Pier Moorings	Pier mooring	2	Yes	Yes
Barmouth Harbour	Quay and estuary moorings	60	Yes	Yes
Conwy Harbour	Quayside	20	Yes	Yes
Ramsey Island Landing Stage	Quayside		Yes	Yes

Transport Infrastructure

11.2.4 The geography and history of Wales have shaped the transport system of today. The range of mountains and hills that extend from Snowdonia to the Brecon Beacons, and the location of the coal fields, have exerted a dominant influence on the growth of Wales, with principal settlements tending to lie near the coast, primarily in the north and south. The greatest population growth has taken place around settlements in South Wales. West of Wales has a mixture of primarily small to medium enterprises (SMEs), businesses in agriculture and tourism, with good east-west road and rail links along the coast but poorer north-south communications. **Figure 11.2** presents the transport infrastructure within the West of Wales.

- 11.2.5 In general, the decline of mining and heavy industry created a greater need for people to travel away from their communities to find work. For those living outside major employment centres, this often means access to the main inter-urban roads. The largest inward commuting flows are to Cardiff, Newport, Caernarfon and Bangor, while the largest outward flows are from the Vale of Glamorgan, Caerphilly, the Isle of Anglesey and Rhondda Cynon Taf. There is also significant traffic flowing between Wales and England on the main road corridors in the north (mainly the A55) and the south (mainly the M4). In the south, the Valley lines carry a significant number of commuters from outlying settlements to the main employment centres (WAG, 2008a and 2008b).
- 11.2.6 In 2005/06, there were approximately 20.1 million rail passenger journeys beginning or ending in Wales. Around 13 million of these journeys were entirely within Wales, with Cardiff the destination for a significant share of these (close to 40 per cent) (WAG, 2008a and 2008b). Local journeys on the West of Wales mainline from Bridgend west are estimated at 1.6 million passenger journeys in 1999. A key rail link is between Aberystwyth and Pwllheli which is a major tourist (and residential) rail link that traverses along the coast of West of Wales. The link also provides direct/indirect flood defence for numerous assets along the coast. The North Wales coastline carries approximately 1,703 freight trains per annum (1.1 million tonnes) which at present only provides a very limited service into Holyhead port. The South West Wales mainline, from Bridgend to the west and including the Ebbw Vale Line, carries some 42,445 freight trains per annum (WAG, 2008). A basic network of intra-regional lines has been retained, although north-south links are fairly limited. The system again has seen only limited investment in recent decades, and across the region as a whole, levels of service are typically limited by relatively low passenger numbers (WAG, 2008a and 2008b).
- 11.2.7 People of the West of Wales living in rural areas spend a higher percentage of their income on transport than those in urban areas. Combined with distinctive geography, these factors have meant difficulty for travel between north and south Wales, and between rural communities and the larger urban areas. The terrain and sparsely populated region of the West of Wales have posed a particular challenge for the provision of cost effective public transport services. This is reflected in higher levels of car ownership in rural areas (WAG 2008a and 2008b).

Critical Infrastructure

- 11.2.8 There are approximately 64 waste water and sewage treatment works within the SMP2 study area occurring regularly along the coastline. Power distribution and electricity sub stations tend to be clustered around the main urban coastal centres (**Figure 11.3**). There are 27 waste treatment and recycling sites occurring within the coastal SMP2 site (**Table 11.2**) most of which deal with non-hazardous waste treatment or metal recycling.

Table 11.2 Waste Management Sites within the West of Wales SMP2 Study Area

Waste type	Site address	NGR
Metal Recycling Site	Unit 6, Waterloo Ind Est, Pembroke Dock, Pembrokeshire, SA72 4RR	SM9789403809
Landfill Non Hazardous Waste	Land At Slade Cross, Slade Cross, Cosheton, Pembrokeshire, SA72 4SX	SM9949202792
Non Hazardous Waste Transfer Station	The Salterns, Tenby, Pembrokeshire, SA70 7NS	SN1270000500
Non Hazardous Waste Treatment	Texaco Refinery, Pembroke, Pembrokeshire, SA71 5SJ	SM9100003000

Waste type	Site address	NGR
Non Hazardous Waste Treatment	Merlins Bridge Wtw, Merlins Bridge, Haverfordwest, Pembrokeshire, SA61 1JW	SM9554514651
Other Non Hazardous Waste	Waterloo Civic Amenity Site, Waterloo Ind Est, Pembroke Dock, Pembrokeshire, SA72 4RT	SM9820003700
Non Hazardous Waste Transfer Station	Land At Unit A, Waterloo Ind Est, Pembroke Dock, Pembrokeshire, SA72 4RT	SM9800203789
Non Hazardous Waste Transfer Station	Manian Fawr, Poppit, St Dogmaels, Pembrokeshire, SA43 3LL	SN1554247753
Other Non Hazardous Waste	Celtic BuildingsThe Old Royal Dock, Edgar Morgan Way, Pembroke Dock, Pembrokeshire, SA72	SM9584403675
Non Hazardous Waste Treatment	Grove Quarry, South Cornelly, Bridgend, CF33 4RB	SM9892200947
Non Hazardous Waste Transfer Station	Off Marsh Road, Rhyl, Denbighshire, LL19 7NT	SJ0031780245
Non Hazardous Waste Transfer Station	Plas Gwilym Quarry, 78 Llysfaen Road, Colwyn Bay, Conwy, LL29 9HE	SH8784378074
Non Hazardous Waste Transfer Station	Plot 2a Tremarl Ind Estate, Llandudno Junction, Conwy, LL31 9PN	SH7973877593
Metal Recycling Site	Port Penrhyn, Bangor, Gwynedd, LL57 4HN	SH5927472835
Metal Recycling Site	Nefyn, Pwllheli, LL53 6EG	SH3044440544
Non Hazardous Waste Transfer Station	Berwyn Yard, Porthdafarch Road, Holyhead, Anglesey, LL65 2SA	SH2479581520
Non Hazardous Waste Transfer Station	Penamser Industrial Estate, Porthmadog, Gwynedd, LL49 9NY	SH5619739136
Non Hazardous Waste Transfer Station	Glan Y Don, Unit 18Glan Y Don, Pwllheli, Gwynedd, LL53 5YT	SH3844935372
Non Hazardous Waste Transfer Station	Borth C.a. Site, Clan - Leri Common, Borth, Ceredigion, SY24 5JF	SN6116189423
Metal Recycling Site	Arch Motors, Maesdu Road, Llandudno, Conwy, LL30 1LF	SH7852781273
Metal Recycling Site	Unit 1Glan-y-morfa Industrial Estate, Marsh Road, Rhyl, Denbighshire, LL18 2PL	SJ0030080400
Other Non Hazardous Waste	71Builder Street, Llandudno, Conwy, LL30 1DR	SH7827481687
Other Non Hazardous Waste	The Old Brickworks, Plot 1Tre Marl Industrial Estate, Llandudno Junction, Conwy, LL31 9BE	SH7963777655
Other Non Hazardous Waste	Glanllynau, Chwilog, Pwllheli, Gwynedd, LL53 6SJ	SH4565137645
Other Non Hazardous Waste	Cae Bwsan, Clynog Fawr, Caernarfon, Gwynedd, LL54 5NN	SH4093449200
Non Hazardous Waste Transfer Station	Ffordd Bronwydd, Treborth, Bangor, Gwynedd, LL57 2NX	SH5449570372
Non Hazardous Waste Transfer Station	Unit 1 Gallaghers Yard, Foryd Bank, Green Avenue, Kinmel Bay, Conwy, LL18 5LE	SH9960080215

Figure 11.1 Community Assets in the West of Wales SMP2 Study Area

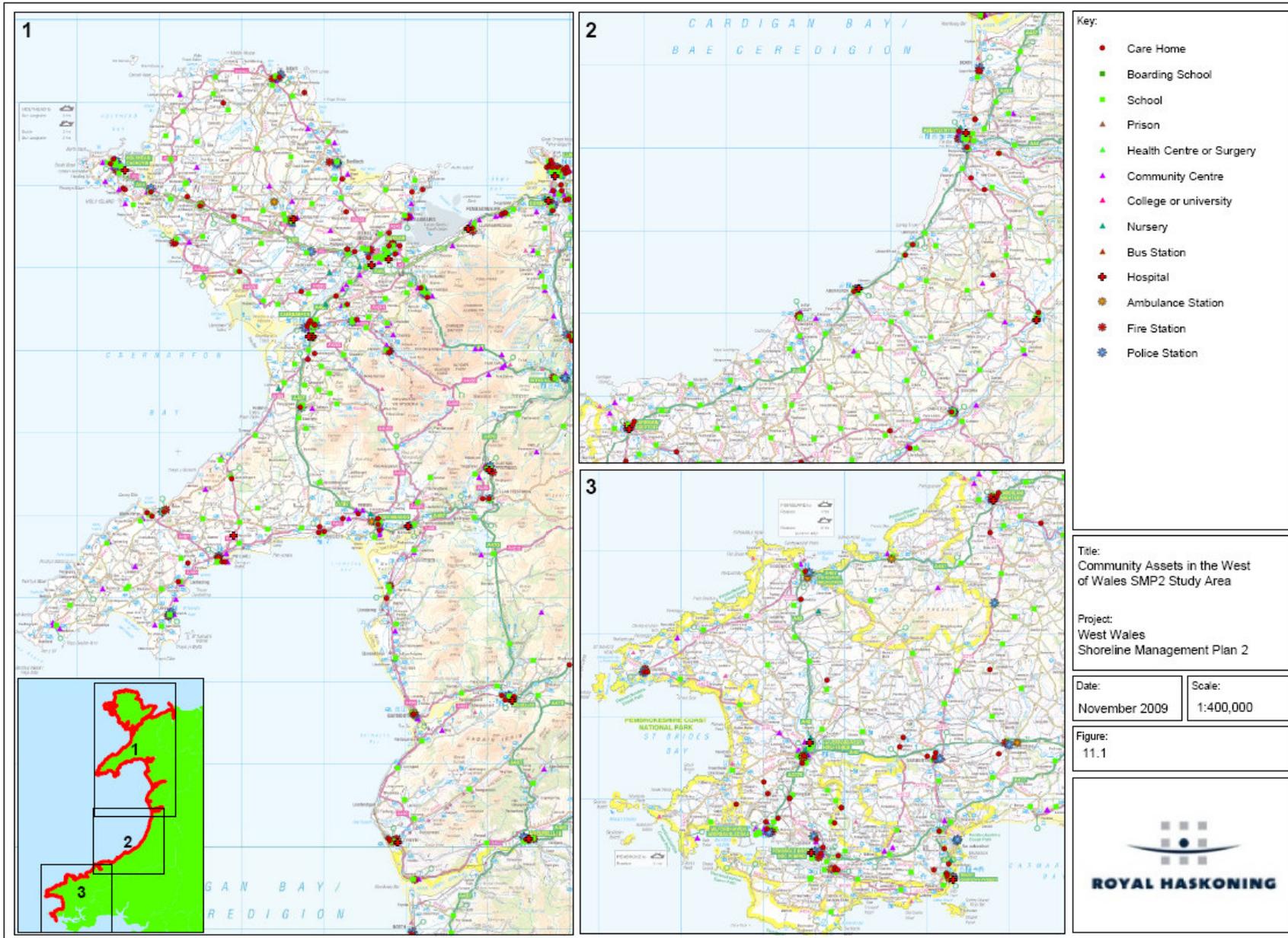


Figure 11.2 Transport Infrastructure in the West of Wales SMP2 Study Area

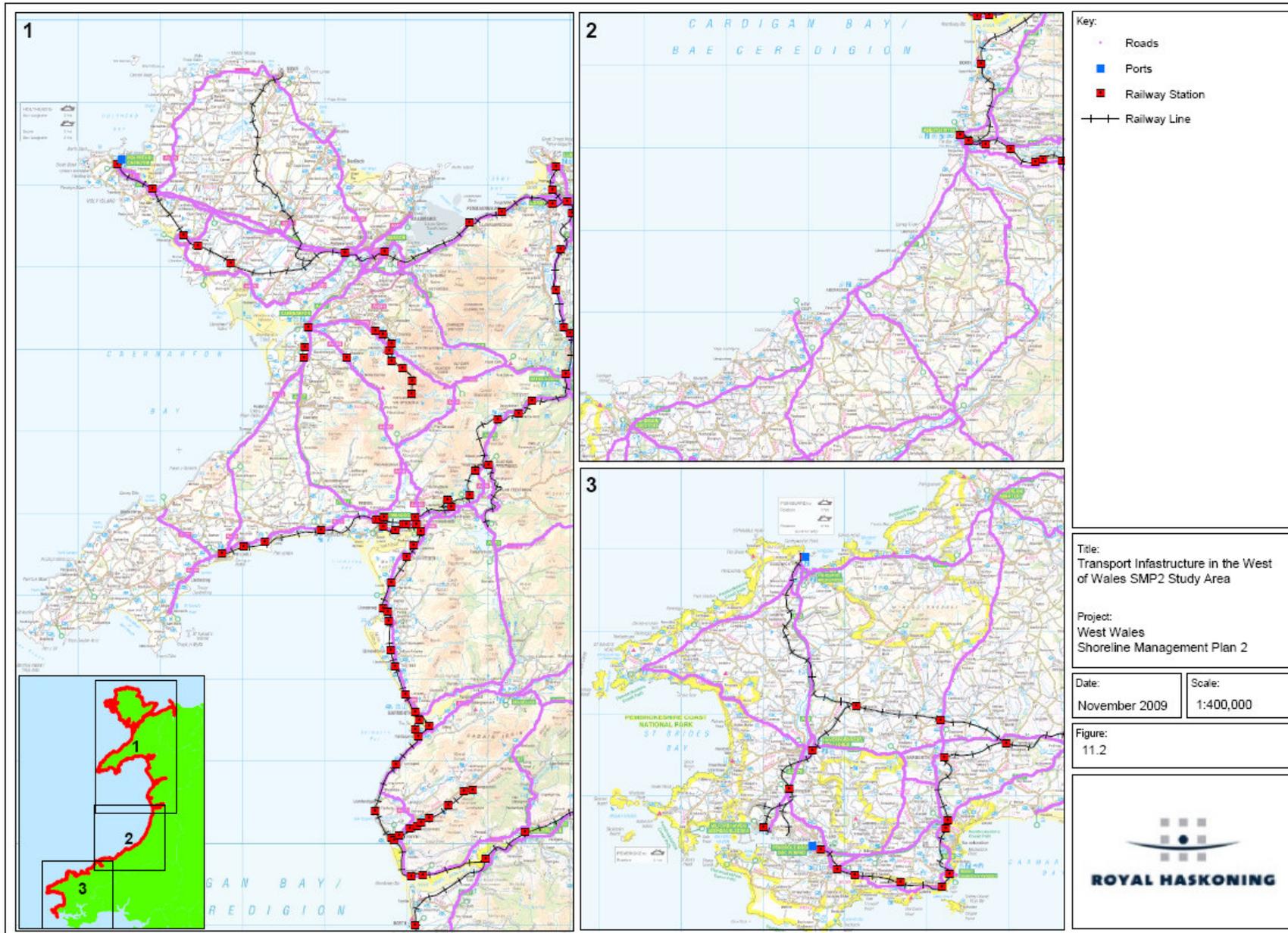
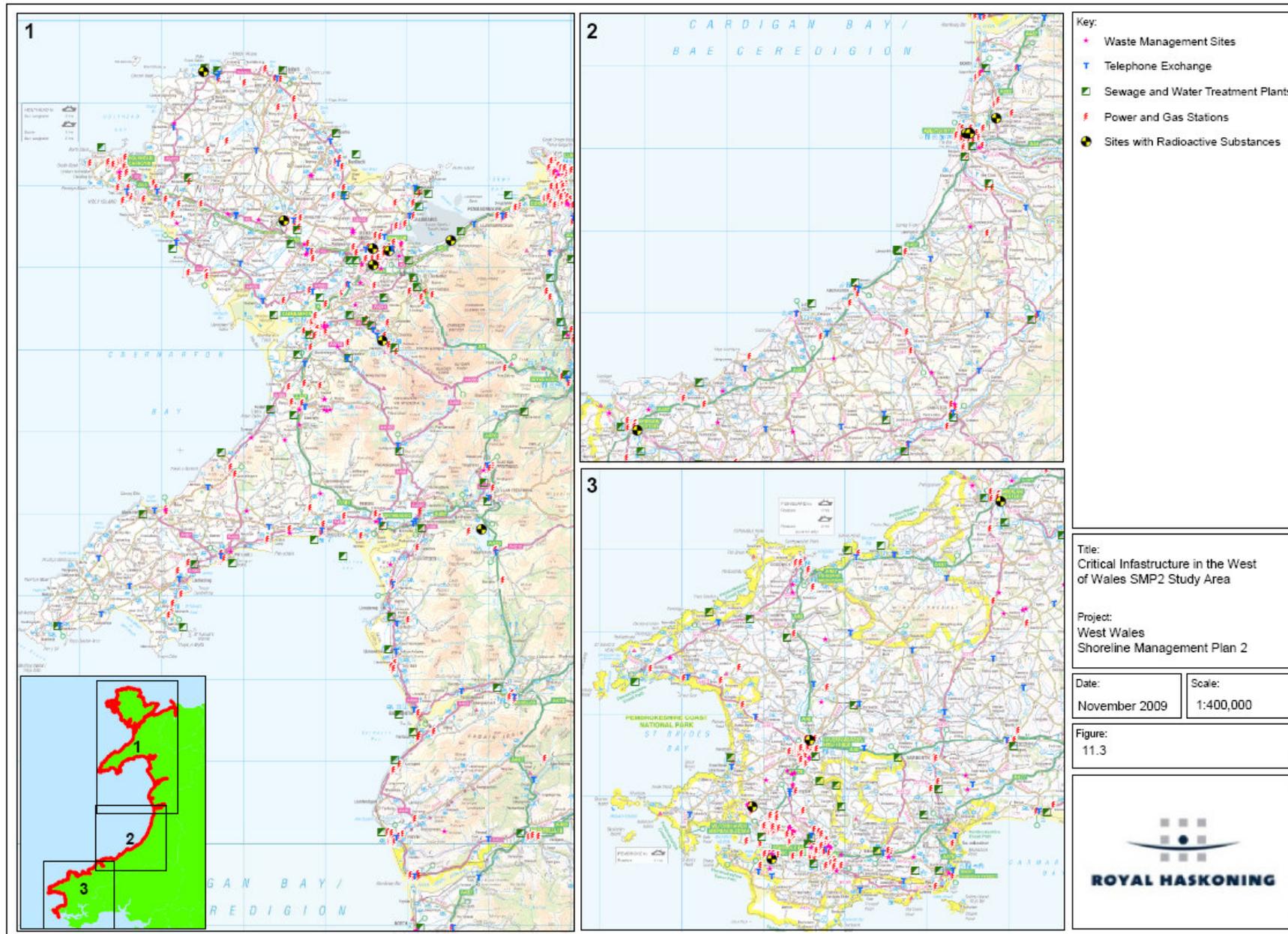


Figure 11.3 Critical Infrastructure in the West of Wales SMP2 Study Area



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12 CLIMATE CHANGE

12.1 Introduction

12.1.1 The effects of climate change for Wales are summarised below based on UK Climate Impacts Programme (<http://www.ukcip.org.uk/index.php>) for the 30-year period from 2070 to 2099 (called the 2080s) under a medium emissions scenario, and for summer and winter temperature and precipitation:

- Under medium emissions, the central estimate of increase in winter mean temperature is 2.8°C; it is very unlikely to be less than 1.6°C and is very unlikely to be more than 4.2°C;
- Under medium emissions, the central estimate of increase in summer mean temperature is 3.5°C; it is very unlikely to be less than 1.9°C and is very unlikely to be more than 5.8°C;
- Under medium emissions, the central estimate of change in winter mean precipitation is 19%; it is very unlikely to be less than 4% and is very unlikely to be more than 42%; and
- Under medium emissions, the central estimate of change in summer mean precipitation is –20%; it is very unlikely to be less than –43% and is very unlikely to be more than 5%.

12.1.2 In summary:

- Summers will become warmer and winters will become milder;
- Rainfall distribution will change, leading to drier summers particularly in eastern and southern areas, and winters will be wetter across Wales;
- Increased frequency of drought throughout Wales, and particularly in the south;
- Increased frequency of high-intensity rainfall in winter leading to a greater likelihood of flooding, landslips, wetter soils, and risk of soil erosion and sedimentation of watercourses; and
- Less winter cold and fewer frost days.

12.2 Scenarios

12.2.1 Climate change is now an accepted phenomenon and is predicted to result in significant changes to flooding in the UK in the 21st century. This is due to changes in rainfall patterns and increases in sea levels. Changes in rainfall patterns could result in changes in the intensity and frequency of storm events and the depth and duration of seasonal rainfall.

12.2.2 Such changes will affect catchment wetness, groundwater flows into rivers, and peak flows in watercourses and urban drainage. Changes in sea level could result in increased tide-locking of watercourses draining to the sea and coastal and tidal flooding of the West of Wales SMP2 study area.

12.2.3 The possible impacts of climate change on flood flows are still being investigated. The recent Office of Science and Technology Foresight report described sets of factors by which flood risk is expected to increase in the next 50 years, based on likely changes to the world economy and subsequent changes expected to greenhouse gas emissions.

- 12.2.4 Recent research has been completed by Defra and the Environment Agency into the impact of the latest climate change scenarios on flood flows in river catchments (UKCIP02, the UK Government Climate Impacts Programme, 2002). This has indicated the significant seasonal variation that is predicted for the UK in the 2080s.
- 12.2.5 Additionally, there are indications that climate change will result in drier summers. The report indicates a reduction in daily summer rainfall amounts of the order of 10 to 50%, combined with more intense, stormier rainfall events (e.g. thunderstorms). These will be problematic for the catchments of the SMP2 with steep topography, which are likely to exacerbate localised flooding problems of surface water drainage systems and the sewerage network. In addition, the problem of roads and property flooding occurring from field run-off is likely to worsen due to the lack of permeability of very dry soils.
- 12.2.6 The latest guidance given by Defra in FCDPAG3 “Supplementary Note to Operating Authorities – Climate Change Impacts” (Defra, 2006c) suggests dealing with climate change by increasing the magnitude of peak flows by up to 10% up to 2025, and 20% beyond 2025. This level of increase in flows will define the high extreme forecast for the future situation. In addition, the guidance identifies that offshore wind speeds should be assumed to increase by 5% up to 2025 and 10% beyond 2025, whilst extreme wave heights should be assumed to increase by 5% up to 2025 and 10% beyond 2025 (Defra, 2006c).
- 12.2.7 Also, the climate change effects for sea level rise would increase the existing risks from tidal flooding, as well as tidally-related fluvial problems. Defra currently recommend adopting 3.5mm/year between 1990 and 2025, 8mm/year between 2025 and 2055, 11.5mm/year between 2055 and 2085, and 14.5mm/year between 2085 and 2115 (Defra, 2006c). This results in sea levels increasing above 1990 levels by 12cm by 2025, 36cm by 2055, 71cm by 2085, and 114cm by 2115.
- 12.2.8 Summing these values provides an estimate of 859 mm of sea level rise between 2009 and 2100. These values do not account for local variations, which are relatively small.
- 12.2.9 Such sea level rise will tend to increase vulnerability to coastal flooding of some low lying areas, and will cause many shorelines to retreat. Soft cliffs will tend to erode more rapidly, whilst the shore platforms of hard cliffs will be submerged more often. Beaches will tend to ‘roll back’ if they are not constrained on their landward side. Beaches that are constrained, for example by a cliff or coastal structure, will tend to be submerged, so that less of their surface is exposed by the tide. In addition, structures built to manage flood risk or erosion will be put under greater pressure. As the water depth in front of them increases, larger waves will reach them, increasing the forces they are subjected to. This will increase the rate at which they deteriorate and mean that, if they are replaced, then this must be with larger structures.
- 12.2.10 The consequences of sea level rise are not all negative; indeed the coast of West of Wales is itself largely a product of this process. Where coasts erode they release sediment, which often builds beaches. As described above the current Welsh beaches have been formed by coastal erosion driven by sea level rise.
- 12.2.11 The SMP2 will therefore examine the climate change scenario for the coastline taking into account a sea level increase of 859 mm of sea level rise between 2009 and 2100, extreme wave heights increased by 10%, offshore wind speeds increased by 10%, and peak river flows increased by 20%.

13 CURRENT AND FUTURE RISKS

13.1 Introduction

13.1.1 The main aim of this section is to briefly highlight what assets in the study area are currently at risk from flooding and erosion and how these may change in the future. These have been identified through various sources including the detailed assessment of the plans and strategies identified and reviewed in **Appendix A**.

13.2 Current and Future Land Use and Communities

13.2.1 Key current and future risks to current and future land use include:

- Urban and rural landscapes of the West of Wales provide attractive places to live and visit, although such areas will become increasingly populated in the near future with potential impacts on the important features of the landscape (e.g. geodiversity and biodiversity);
- Impacts of sea level rise on existing and planned urban / coastal developments such as the Borth and Holyhead Waterfront Development Strategy;
- Landward migration of coastal settlements in response to rising sea levels and dealing with the practicalities of this adaptation for some settlements below cliffs or escarpments such as Barmouth;
- Impacts on sustainable development and tourism assets (e.g. loss of miniature railway line at Barmouth);
- Maintaining national and regional connectivity including connectivity between smaller communities with good access to essential services and facilities;
- Several coastal towns and villages have suffered from storm damage (e.g. Colwyn Bay). Coastal defences protect human life and property, as well as road and rail routes. It is therefore essential that improvements to the coastal defences achieve the highest level of protection without harming beach quality, geodiversity, ecology or tourism;
- Access to adequate recreational open spaces along the coastline, which may be reduced due to coastal squeeze and changes to coastal processes;
- Erosion of local distinctiveness and loss of coastal vegetation to urban, industrial and agricultural development;
- Abandonment by farmers leads to the lack of grazing leading to scrub encroachment;
- Contamination of land from past industrial development can cause unacceptable risks to the community. Such risks may increase in response to changes in surface run off / flooding conditions due to climate change;
- Land use changes such as agriculture and associated implications to drainage and run-off processes which may influence coastal cliff morphology;
- Riverine and wetland habitats have been degraded and lost through land drainage, floodplain development, agricultural impacts, and the spread of invasive non-native plant species, particularly Japanese knotweed; and
- The construction of landfill sites alters landscapes generating odours, dust and noise. Unlicensed disposal of waste and flytipping disfigure the landscape. Such waste concerns have the potential to become more serious due to increased flooding (e.g. flooding of landfill sites).



Plate 1: Colwyn Bay's promenade was battered by high winds and ferocious waves in April 2009 highlighting the need for improved sea defences. Source: <http://www.northwalesweeklynews.co.uk/>)

13.3 The Water Environment

13.3.1 Key current and future risks of the water environment include:

- Increased frequency and magnitude of storm water overflow events leading to pollution of coastal waters either through a lack of maintenance or increased rainfall as a result of climate change;
- Increased 'backflow' of storm water/sewage infrastructure through a lack of maintenance or increased rainfall as a result of climate change;
- Rising sea levels leading to unpredictable coastal dynamics, which may increase coastal erosion and damage coastal amenities, for example the recent damage of Colwyn Bay's promenade (**Plate 1**) which will both be vulnerable to surge and sea level rises;
- Rising sea levels may also lead to significant changes in fluvial dynamics and processes;
- Potential risks of sea level rise/surge into water supply/abstractions;
- Potential for loss of small towns and villages due to sea level rise, tidal and fluvial flooding for example, Fairbourne, Beaumaris, Barmouth, Holyhead and Conwy (Gwynedd), Fishguard and Goodwick (Dyfed);
- Impacts to freshwater habitats in response to defences and/or coastal squeeze (e.g. impacts to coastal saltmarsh);
- Increase in flash flooding due to heavy rain and an increase in river and coastal flooding and erosion;
- Reduced bathing and water quality due to potential increased diffuse pollution and litter of beaches; and
- Changes in fisheries, tourism and recreation sustainability.

13.4 The Coastal Environment and Geology

13.4.1 Key current and future risks of the coastal environment and geology include:

- Coastal defences, which can have a major impact on natural coastal processes, border some 29% of the Welsh coastline. They are having a major impact on the coastal landscape of Wales;
- The loss of or damage to geological and geomorphological interest features on the coast due to development and/or coastal/flood defence works, such as at Solva SSSI, Abermawr SSSI, Creigiau Pen Y Graig SSSI, Newport Sands SSSI, and parts of the Pembrokeshire Coast;
- Mwnt beach (near Cardigan) is slowly retreating;
- Sea level rises and implications on recreation and tourism;
- Deterioration of coastal and flood defences;
- Increased tidal and fluvial flooding with such areas at risk including those settlements described in **Section 13.3**;
- Interruption of sediment supplies by defence works leading to exacerbated erosion problems elsewhere;
- Increased frequency and magnitude of major winter rainfall events leading to flash flooding and instability of cliffs, with such areas at risk including those settlements described in **Section 13.3**; and
- Lack of sediment supply around the coast leading to exacerbated erosion problems, with such areas at risk including the Borth sand dunes, while impacts of sea level rise could change existing physical and chemical conditions of habitats such as salinity levels of coastal lagoons (**Plate 2**).



Plate 2: The Cemlyn lagoon.
(Source: Eric Jones, 2009)

13.5 Biodiversity

13.5.1 Key current and future risks of biodiversity include:

- Changes to current distributions of habitat and species due to climate change;
- Loss of coastal habitats (e.g. saltmarsh and mudflats) due to coastal squeeze between rising sea levels and hard sea/flood defences, for example loss of saltmarsh/mud flats of Mawddach Estuary;
- Potential risks to sea level rise/surge in estuarine and riparian habitats;
- Fragmentation of habitats;
- Colonisation of habitats by 'new' species due to climate change;
- Sea levels rises and direct loss of species biodiversity and habitat, such as increased flooding / inundation risk to Ynys Feurig, Cemlyn Bay, and The Skerries SPA including The Cemlyn lagoon (**Plate 2**);
- Increased recreational use of waterways and associated impacts to habitats and species, such as impacts to the Cardigan Bay SAC, and Carmarthen Bay and Estuaries SAC;
- Deterioration of habitats and associated species due to coastal and flood defence works and cliff stabilisation works, such as the surrounding maritime cliffs and slopes of Gwynedd (e.g. Llyn Peninsula);
- Existing developments built in inappropriate coastal locations reliant on ongoing defence works;
- Existing coastal defences that are no longer economically justifiable but which have residual effects;
- Interruption to sediment supplies and movement along the shore affecting habitats and associated species;
- Freshwater and brackish habitats reliant on protection from existing sea defences;
- Increase in tourism and water based activities will impact on coastal and cliff erosion and may impact birds, cetaceans etc; and
- Fragmentation of habitats is a key issue; in recent years there has been a general trend of wildlife habitats becoming smaller and more isolated. The effects of climate change have the potential to impact further on flora and fauna, it is therefore important to ensure linkages and corridors are developed that will help wildlife to respond to climate change.

13.6 The Historic Environment

13.6.1 Key current and future risks of the historic environment include:

- Loss of archaeological sites such as SMs and historic sites through flooding and coastal erosion;
- Increased recreational pressure on historic sites;
- Inappropriate coastal development affecting historic sites and historic landscapes;
- Increased loss of historic sites through changes in climate change such as those occurring in the intertidal and sub tidal zone. Key sites that maybe under threat to changes in climate change and associated weather conditions include for example,

Conwy castle (**Plate 3**) ; Criccieth castle; Cymru - Mwnt - ar chapel; ruins of St Dwynwen's church and the lighthouse; St Dogmael's Abbey; and St Non's Chapel; and

- There are numerous unscheduled and undesignated archaeological sites across the SMP2 study area, and there are likely to be many more currently unknown sites that in the future could be revealed by development or ongoing coastal erosion, or affected by coastal management policies.



Plate 3: Conwy Castle.
(Source: <http://www.redbubble.com/>)

13.7 Material Assets

4.6.1 Key current and future risks associated with community and assets:

- Increased closures of coastal sections of railway;
- Sustainability of existing infrastructure, rising sea-levels and managed retreat;
- Cliff erosion (retreat) and risk to community assets (e.g. Cardigan Bay);
- Flood risk, for example in urban areas and settlements described in **Section 13.3**;
- Reduction in public open spaces due to coastal cliff retreat in response to erosion (e.g. Cardigan Bay);
- Reduction in tourism due to beach loss through erosion or lack of sediment supply;
- Reduction in tourism due to deteriorations in bathing water quality; and
- Increased development pressure along the coastal shoreline and associated transport infrastructure.

Q 13.1 Are there any specific current or future risks you feel are not identified?

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14 SCOPING AND SEA METHODOLOGY

14.1 Sustainability Issues and Constraints for the Study Area

14.1.1 The Environment Strategy for Wales (2006) sets out the long term strategy or framework for action in the Wales for the next 20 years. It highlights the key sustainability issues for the Wales as a whole, and sets out a series of objectives and actions that provide a framework within which to address these issues. The key issues are as follows:

- Climate change;
- Degraded ecosystems and water quality;
- Unsustainable resource use;
- Loss of biodiversity;
- Loss of landscape, heritage quality and distinctiveness;
- Poor quality living environment;
- Environmental hazards and their associated health risks; and
- Flood defences and developments on coastal morphology.

14.1.2 Some of these issues and objectives are particularly relevant to the West of Wales SMP2 study area and these are highlighted in **Table 14.1**.

Table 14.1 Key Sustainability Issues in the Region

Issue	Objective
Climate Change	To respond to the risks, challenges and opportunities presented by climate change. This includes adaptation measures for sea level rise, coastal flooding, river flooding and loss of biodiversity.
Wiser Use of Natural Resources	To ensure that natural resources are used sustainably, with minimal environmental damage, to protect the quality of the regions environment. This includes ecosystems/habitats, biodiversity, landscape and heritage.
Food, Farming, Forestry and Fishing	To enhance the ability of the food, farming, forestry and fishing sectors to provide the environmental and social benefits that people in the region need and expect, and help to secure a viable future for them.
Tourism	To promote a tourism and leisure industry that conserves and enhances the environment and recognises the region's distinctiveness.
Spatial Planning	To promote the wise use of land and a safe and healthy environment for local communities, contributing to sustainable development through environmental enhancement and ensuring that Wales remains a region of diverse and distinctive heritage, wildlife and landscapes.

14.1.3 There are certain key sustainability issues which are important to the West of Wales SMP2. This section sets out the environmental and social issues, which have been derived from information from various sources, including the baseline data, and existing plans, programmes and strategies. **Table 14.2** presents the issues currently identified.

Table 14.2 Sustainability Issues within the West of Wales SMP2 Study Area identified from the Plan and Policy Review

Issue	Supporting information	Implications
Climate change and fluvial processes	<p>There are various impacts associated with climate change, namely:</p> <ul style="list-style-type: none"> • Rising sea levels; • Increase in intensity of rainfall and frequency and magnitude in fluvial flooding; • Increasing extreme wave heights; and • Increasing offshore wind speeds. 	<p>Policies should enable adaptation to natural changes as a result of climate change, in particular the need to address the following likely impacts:</p> <ul style="list-style-type: none"> • Increase in river and coastal flooding; • Increased fluvial erosion; • Increased pressure on coastal and flood defences; • Increase in winter storm damage and coastal erosion; • Habitat and species loss (particularly those associated with defences); • Changes to the landscape; and • Increased cliff erosion and instability due to changes in drainage and stronger storms and higher sea levels.
Material Assets	Tidal and fluvial flooding risks to material assets.	SMP policies should seek to ensure that valued material assets such as transport infrastructure are protected and maintained where appropriate and or that infrastructure is adaptable to climate change issues (see above).
Biodiversity	<p>Biodiversity loss is continuing due to a range of pressures, including overgrazing, agricultural intensification and nutrient enrichment, overfishing, contamination, and increased development pressure. Increased recreational activities along the coast are also a major concern impacting upon both habitats and species.</p>	<p>Policies should protect and avoid all designated habitats and protected species, particularly those that are at risk or sensitive, including those associated with coastal and flood defences, and the marine and freshwater environment. Furthermore, measures should where possible enhance the quality of designated habitats wherever possible.</p>

Issue	Supporting information	Implications
Water quality	Climate change issues relating to saltwater incursion into water supply/abstractions. Although bathing water quality within the study area is reasonably good, there remain problems which could be exacerbated by coastal development and climate change.	Policies should ensure that the bathing water quality is protected and where possible enhanced.
Integrity of the landscape and seascape	Pressure from development and coastal defences can adversely affect landscapes and seascapes within the study area. This is likely to increase over time.	Policies should avoid disturbance to the landscapes and seascapes, and protect local and regional distinctiveness.
Historic environment	There is potential loss and damage to heritage assets due to a range of pressures such as future development demands, provision of coastal defences, and also coastal erosion.	Policies should ensure that historic environment assets (and historic landscapes) are protected and conserved.
Health	The community of the study area in general has good health.	Policies should prevent increased risk to life from coastal and tidal flooding.
Coastal and flood defences	Issues with the natural environment e.g. biodiversity, habitat and coastal geomorphology including cliff stability occur and will increase with climate change.	Policies should avoid unnecessary loss of biodiversity, habitat and increased damage to the geomorphology of the coastline.

Q 14.1 Are there any significant environmental issues not listed in Tables 14.1 and 14.2?

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15 SCOPING AND SEA METHODOLOGY

15.1 Active Use of the SEA within the SMP2 Process

15.1.1 Following consultation on this **Scoping Report**, the assessment criteria (see **Section 15.5**) will be used to evaluate policy scenarios for the SMP2. The SEA will provide a comprehensive assessment of effects on the environment which will also include a strategic assessment of those effects identified through the following:

- The Appropriate Assessment (AA) under the Habitats Directive for the SMP2; and
- Consideration of the requirements of the Water Framework Directive.

15.1.2 Suggested policies will be developed as a preferred option. At this stage the SEA will be used to demonstrate clearly how environmental considerations have been addressed within the SMP2 process. To this end, the SEA will provide a transparent account of how environmental matters have been addressed and how this has shaped policy selection. This will culminate in the provision of the **Environmental Report**.

15.1.3 As a component of the environmental report, the SEA monitoring plan will provide a series of actions, based on the indicators provided, which will ensure that unexpected consequences of the plan will be identified.

15.2 Context and Methodology

15.2.1 The SEA process is clearly defined in the SEA regulations and guidance suite, and is described in more detail in **Section 15.5** below. The basic process follows the provision of a scoping report (this document) which provides the baseline, identifies key environmental issues, outlines the methodology and offers a series of assessment criteria. Following consultation on this document and the development and assessment of SMP2 policy, an Environmental Report (ER) will be produced which details and records the actual assessment and identifies mitigation/compensation that may be required if adverse impacts cannot be avoided or reduced. The ER will accompany publication of the draft SMP2 and actions taken as a result of public feedback to be reported in the Post Adoption Statement (PAS). The PAS details the manner in which the assessment will be used to ensure that the actual affects of the SMP2 are accounted for through monitoring and response.

15.3 Alternative Options/Strategies

15.3.1 The West of Wales SMP2 will manage the shoreline of the sub-units by looking at four different policies which are holding of the existing defence line; advancing the existing defence line; managed realignment, or no active intervention (see **Table 2.1**). These policies will be assessed against the environmental assets and criteria (see below) for the study area, on a unit by unit basis.

15.4 Scoping in/out of SEA Issues

15.4.1 **Table 15.1** provides a list of key Environmental Impact Assessment (EIA) parameters used to asses SEAs, and which of these parameters will be scoped in and out of the SEA with regards to their relevance to coastal and flood defence implications. The parameters that are scoped out of the SEA have been excluded based on the review of the four different strategies of shoreline management and the likelihood of any significant adverse impacts occurring to the specific parameters.

Table 15.1 Selected EIA Parameters for SEA

EIA Parameters	In SEA	Out of SEA
Human Beings		
Settlements and property	✓	
Community assets	✓	
Infrastructure	✓	
Recreational assets and amenity	✓	
Flora and Fauna		
Habitats and species	✓	
Geophysical processes and functions	✓	
Fisheries	✓	
Air and Climate		
Air quality		x
Noise and vibration		x
Climate change	✓	
Landscape and Visual Amenity		
Landscape character	✓	
Visual amenity	✓	
Land Use		
Development type	✓	
Management: Change in use	✓	
Historic Environment		
Archaeological sites and monuments	✓	
Non-designated assets	✓	
Traffic and Transport		
Traffic and volume	✓	
Transport infrastructure	✓	
Soil, Geology and Hydrogeology		
Geological/geomorphological features and processes	✓	
Hydrogeology	✓	
Soil and land quality	✓	
Water Quality		
Bathing Waters	✓	
Shellfish Waters	✓	
Water Framework Directive status of coastal waters	✓	
Impacts on water resources	✓	
Use of Natural Resources		
Use of construction material		x
Use of re-cycled material		x
Use of energy efficient measures		x
Using water wisely		x
Wastes arising		x

Q 15.1 Are all the relevant parameters scoped in to the SEA from Table 15.1?

15.5 SEA Methodology of the West of Wales SMP2

15.5.1 The SEA framework is identified in **Section 1.2**. This section presents the detailed steps to be undertaken in producing the Environmental Report.

15.5.2 **Step 1 - Assessment of the SMP2 Policies:**

15.5.3 The Environmental Report (ER) will identify the likely significant positive or negative effects of the proposed themes on the relevant environmental objectives and indicators (including positive and negative, direct, indirect, short, medium and long-term, permanent and temporary effects). The ER will also identify mitigation measures that will aim to avoid, reduce or offset potentially significant adverse impacts of the proposed plan (see below). Reference is made to the cumulative effects of proposed policies, the analysis of which is described in Step 2. Impacts will be ascribed significance as presented in **Table 15.2**.

15.5.4 Using this information, in broad terms, impacts have been classified as either positive or negative, with the descriptor of 'minor', 'major' or 'neutral' used to denote whether the impact is significant or not significant based on particular criteria.

15.5.5 **Step 2 - Assessment of the Cumulative Effects of the SMP2 Policies:**

15.5.6 This analysis will use information generated by the assessments of individual policies in the West of Wales SMP2 document carried out in Step 1. All the effects of proposed policies will be identified and specified, and consideration made of whether significant cumulative environmental effects are likely to occur.

15.5.7 **Step 3 – Mitigation and Monitoring System for the SMP2**

Any mitigation measures or monitoring indicators which are required as a result of the SEA will be clearly specified and listed in the ER and ultimately included in the SMP Action Plan. This approach provides the most robust mechanism for delivery, since the Action Plan is a) directly linked to the SMP delivery and b) builds on the organisational roles developed within the SMP process.

15.5.8 In deriving the proposed monitoring indicators particular attention will be paid to indicators related to the impacts judged most likely to occur, as well as those with the potential to cause significant environmental impact.

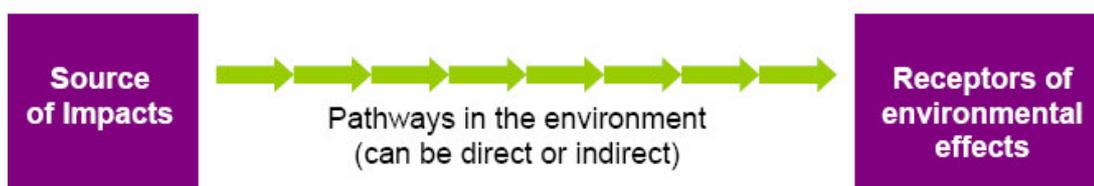
15.5.9 The ER will also accompany publication of the draft SMP2 and actions taken as a result of public feedback to be reported in the PAS.

Note: It is important to note that the approach to SEA for the West of Wales SMP2 is at a higher level than would be taken for an Environmental Impact Assessment (EIA) for a specific project. Consequently, impacts are targeted at 'regional' scale issues and, as such, the indicators that provide regional scale focus have been considered more important than those that provide information on a local or county scale level. This is in accordance with the SEA Directive.

15.6 Prediction and Evaluation Methodology

15.6.1 The proposed methodology to identify and predict the likely significant environmental effects of implementing the plan is described below. To predict the environmental effects of implementing the SMP2, the widely accepted source-pathway-receptor model (SPR) will be adopted as indicated in **Figure 15.1**. Determination of the potential effects of the SMP policies will therefore be based on examining the sources of effect that may occur (physical, chemical or biological), the pathway (or route) by which the effect could influence a receptor (e.g. direct footprint disturbance or indirect coastal process change), and the receiving environment or resource (the receptor).

Figure 15.1 The Source-Pathway-Receptor Model as Applied to SEA



15.6.2 The significance of the effects is then evaluated based on the consideration of the magnitude of the potential effect, the value and sensitivity of the receiving environment (the receptor), and the likelihood of the effect occurring.

15.6.3 The magnitude refers to the 'size' or 'amount' of an effect in relation to the receptor, and the duration of the impact. It must be noted that this also takes into account the 'context' of the receptor with respect to its rarity or commonality, which is also linked to the value of the receptor.

15.6.4 The value and sensitivity of the receptor will be a function of a variety of factors e.g. biodiversity value, social/community value and economic value. The value or potential value of a resource or feature can be determined within a defined geographical context. The following hierarchy is recommended by IEEM (2006) with respect to ecological parameters (and this is also carried over to social, economic, built environment, and other parameters):

- International
- UK;
- National (i.e. England/Northern Ireland/Scotland/Wales);
- Regional;
- County (or Metropolitan - e.g. in London);
- District (or Unitary Authority, City, or Borough);
- Local or Parish; and
- Within zone of influence only (which might be the project site or a larger area).

15.6.5 With respect to the probability of an effect occurring the likelihood of it occurring could potentially influence the scale of an impact, particularly where there is little evidence or risk of an effect occurring on, for example, a nationally important receptor.

15.6.6 Using the values and sensitivity of the receptor, together with the magnitude of the effect, and the probability of the effect occurring, the degree of significance of the potential impacts will be determined.

- 15.6.7 This determination and evaluation will be a qualitative exercise based on professional judgment and supported by peer-reviewed literature where possible. It is important to stress that given the nature of SMP policy, which is high level and therefore lacks the detail of an actual scheme, the assessment will be based on established effects wherever possible, but will rely heavily on expert judgement of anticipated effects. The performance of each SMP2 policy against each assessment criterion will be given a significance classification in addition to a short descriptive summary (e.g. widespread negative effects with no uncertainty).
- 15.6.8 For each SMP2 policy, the assessment table will also include a more comprehensive rationale of the judgment process used for determining the environmental effects and likely significance of each SMP2 policy. In particular, the following considerations will be paramount in determining environmental effect and likely significance:
- Value and sensitivity of the receptors;
 - Is the effect permanent / temporary;
 - Is the effect positive / negative;
 - Is the effect probable / improbable;
 - Is the effect frequent / rare;
 - Is the effect direct / indirect; and
 - Will there be secondary, cumulative and / or synergistic effects.
- 15.6.9 In broad terms, the impacts will be classified as either positive or negative, with the descriptor of 'minor', 'major' or 'neutral' used to denote whether the impact is significant or not significant based on particular criteria. A detailed description is presented in **Table 15.2**.
- 15.6.10 The assessment will be recorded on a series of assessment tables as shown in the example in **Table 15.3**, with each SMP2 policy benefiting from a clear and transparent account of its likely effects on the environment and the significance of such effects, including whether the impact is direct, indirect, secondary, permanent or temporary. Cumulative impacts are assessed separately on completion of the initial assessment.
- 15.6.11 Data will be required to support the assessment of likely effects on a range of environmental receptors. This assessment will be based on available information and will have regard to the relatively abstract nature of SMP2 policy (in comparison to scheme level data).
- 15.6.12 The use of appropriate receptors has been considered in the development of assessment criteria, whereby the manner in which each receptor (in response to the environmental issues of the West of Wales coast) is affected by the SMP2 will be clearly described. Where gaps in knowledge exist (relating to the information required to support an assessment of the link between policy and receptor), expert judgement will be used or a decision of unquantifiable effect recorded.

Note: It is important to note that the approach to SEA for the West of Wales SMP2 is at a higher level than would be taken for an Environmental Impact Assessment (EIA) for a specific project. Consequently, impacts are targeted at 'regional' scale issues and, as such, the indicators that provide regional scale focus have been considered more important than those that provide information on a local or county scale level. This is in accordance with the SEA Directive.

Table 15.2 Significance Criteria to be used in the Assessment of Impacts

Score	Description
Major Positive ✓✓✓	The policy is likely to lead to a positive impact on nationally (or internationally) important parameters, or a significant achievement of the sustainability objective. The positive impacts may be short-term large-scale or long-term and national in scale. In addition, significant cumulative and indirect positive impacts are likely within and outside the West of Wales SMP2 area.
Moderate Positive ✓✓	The policy is likely to lead to a positive impact on regionally important parameters, or a moderate achievement of the sustainability objective, or a significant positive impact of local scale. The positive impacts may be short-term large-scale or long-term and regional in scale. Positive cumulative impacts would arise between local areas or a number of parameters.
Minor Positive ✓	The policy is likely to lead to a positive impact to locally important parameters, or a minor achievement of the sustainability objective. Impacts would be short and long-term, or could be moderate negative impacts in the short-term. There may be limited if any cumulative or indirect impacts within the West of Wales SMP2 area.
Neutral O	The policy would have no positive or negative impacts or change to the objective in either the short or long-term. A neutral score arises when there is a fair degree of certainty that no positive or negative impact is predicted, or where an impact would be dependent on the location of the measures of such a policy.
Minor Negative x	The policy is likely to lead to a negative impact to locally important parameters, or a minor reduction to the sustainability objective. Impacts would be short and long-term, or could be moderate negative impacts in the short-term. There may be limited if any cumulative or indirect impacts within the West of Wales SMP2 area.
Moderate Negative xx	The policy is likely to lead to a negative impact on regionally important parameters, or a moderate reduction of the sustainability objective. Impacts would be short and long-term, or could be significant negative impacts in the short-term. The policy may have limited cumulative and indirect impacts within a project area.
Major Negative xxx	The policy is likely to have a negative impact on nationally (or internationally) important parameters or a series of long-term small scale (cumulative) impacts. The policy is likely to significantly disrupt the achievement of the sustainability objective. Indirect impacts may also extend outside the West of Wales SMP2 area.
Mixed ✓✓/x or ✓/xx	The policy is predicted to result in both positive and negative impacts. Mixed impacts could potentially be significant in the long-term and result in cumulative impacts.
Indeterminable ?	The scale of the effect of the policy is unpredictable, but a value judgement is made on the scale in relation to the overall influencing environment. The effect may be dependent on many factors that cannot be ascertained at this strategic level, for example where the option covers a range of issues, or where the implementation will determine the impact.

Table 15.3 Method of Impact Derivation for Environmental Effect and Likely Significance

Rationale/background	Predicted outcomes	Likely effect	Assessment/recommendation
		Specify effects: <ul style="list-style-type: none"> • Permanence • Magnitude • Direction • Frequency • Scale • Duration • Secondary, cumulative or synergistic impacts. 	
		Sensitivity (importance) of the resource.	
		Probability of effect.	

15.6.13 Where potentially significant negative impacts have been identified and evaluated, mitigation measures will be examined to ascertain whether there are particular forms of coastal management or where changes in policy or any other potential actions could be implemented to prevent, minimise or compensate/remediate the impact. Compensation is the last resort, whilst prevention is the preferred solution wherever possible (and where this does not conflict with or result in even greater negative impacts on other receptors).

15.7 Introduction to the SEA Objectives

15.7.1 The aim of sustainable development is to balance economic progress with social and environmental needs, and not to take resources that future generations may need to survive and develop. Sustainable shoreline management policies will be those which take account of the relationships with other defences, developments and processes, and which avoid, as far as possible, committing future generations to inflexible and expensive options for defence. Putting the policies into practice should benefit stakeholders and help to improve the environment, both nationally and locally. Environmental quality in relation to the coast includes, geology and geomorphology, landscape, heritage, flora and fauna and their associated habitats, water quality and resources (for both humans and the natural environment), and the many other environmental “assets” and “resources”.

15.7.2 Sustainability objectives are the essential tool for comparison and decision making within the creation and selection of the SMP2 policies. The objectives for the West of Wales SMP2 are presented in **Table 15.4**, and are based on the the objectives of the adjoining North West England and North Wales SMP2 which runs east from the Great Orme (Halcrow, 2010) in order to ensure consistency across the SMP units as well as consistency in the assessment of the potential effects of the SMP policies. The indicators that were presented with the sustainability objectives (Halcrow, 2010) have been added to where relevant to this SMP study area. The indicators ensure that wherever possible an objective and quantifiable assessment of the policies can be undertaken, providing greater transparency. These indicators can also provide some of the key indicators that would be used for monitoring of the SMP2 policies into the future.

Table 15.4 West of Wales SMP2 Sustainability Objectives and Indicators

SEA Objective	Features covered by the objective (following scoping)	Indicator	Target
Biodiversity, Flora and Fauna			
To support natural processes and maintain and enhance the integrity of internationally designated nature conservation sites and maintain / achieve favourable condition of their interest features (habitats and species)	<ul style="list-style-type: none"> • Special Protection Areas (SPAs) • Special Area of Conservation (SACs) • Ramsar Sites and Marine Protected Areas 	Reported conservation status of international conservation sites relating to flood risk management and erosion	No deterioration in the conservation status of designated sites as a result of changes in flood / erosion risk management measures.
To avoid adverse impacts on, conserve and where practical enhance the designated interest of nationally designated nature conservation sites. Maintain/achieve favourable condition	<ul style="list-style-type: none"> • Site of Special Scientific Interest (SSSIs) • National Nature Reserves (NNRs) 	Reported conservation status of national conservation sites relating to flood risk management and erosion	No deterioration in the conservation status of designated sites as a result of changes in flood / erosion risk management measures.
To avoid adverse impacts on, conserve and where practical enhance the designated interest of locally designated conservation sites (also covers Earth Heritage, Soils and Geology)	<ul style="list-style-type: none"> • Local Nature Reserves (LNRs) • RSPB reserves <p>There is also a generic statutory duty (Natural Environment and Rural Communities Act 2006) to have regard for the conservation of biodiversity which applies to all public bodies and which extends beyond designated sites.</p>	Reported conservation status of local conservation sites relating to flood risk management and erosion	No deterioration in the conservation status of designated sites as a result of changes in flood / erosion risk management measures.
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats	<ul style="list-style-type: none"> • National and local BAP habitats 	BAP habitat present	No loss of extent of BAP habitat.
Earth Heritage, Soils and Geology			
To support natural processes and maintain geological exposures throughout nationally designated geological sites	<ul style="list-style-type: none"> • Geological Sites of Special Scientific Interest (SSSIs) relating to flood risk management and erosion 	Reported conservation status of geological SSSI	No deterioration in the conservation status of the designated site as a result of changes in flood / erosion risk management measures.
To maintain and enhance features as a natural flood defence	<ul style="list-style-type: none"> • Beaches • Dune systems 	Number of natural features currently providing a natural flood defence function	No loss of natural features currently providing a natural flood defence function.

SEA Objective	Features covered by the objective (following scoping)	Indicator	Target
Water			
Manage and minimise risk of pollution from contaminated sources	<ul style="list-style-type: none"> • Historic and active landfill sites (EA source), major industry and hazardous waste sites, anecdotal evidence of disused mines, potentially contaminated land, designated bathing water, surface and ground water (e.g. Groundwater Source Protection Zones) • Commercial fishing grounds and shell fisheries (e.g. Shellfish Harvesting Areas) 	Number of potentially polluting sites at risk from tidal flooding and/or coastal erosion	No increase in risk to potentially polluting sites at risk from tidal flooding and / or coastal erosion compared with 'do nothing' policy.
Landscape Character and Visual Amenity			
To conserve and enhance nationally designated landscapes in relation to risks from coastal flooding and erosion and avoid conflict with AONB and National Park Management Plan Objectives	Changes in landscape character and views within: <ul style="list-style-type: none"> • Areas of Outstanding Natural Beauty • (AONB) • National Parks • Heritage Coasts 	Compliance with AONB and National Park objectives relevant to tidal flood risk/erosion management. Change in landscape character within designated areas.	No adverse impacts on landscape character within designated sites as a result of a change in flood risk / erosion management measures.
Historic Environment (Cultural Heritage)			
To minimise coastal flood and erosion risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	<ul style="list-style-type: none"> • World Heritage Sites • Scheduled Monuments (SM) (England and Wales) • Registered Parks and Gardens • Listed Buildings • Conservation Areas 	Areas of architectural and archaeological importance at risk from tidal flooding and/or coastal erosion	No increase in tidal flood/erosion risk for archaeological features sensitive to flooding / erosion, compared with the do nothing' policy.
Material Assets			
To minimise the impact of policies on marine operations and activities	<ul style="list-style-type: none"> • Ports and harbours, Boatyards Moorings, Yacht and Sailing Clubs Ferry routes and waterways Coastguard, lifeboat and lifeguard. • Access to the sea and navigation 	Number of marine operations and activities affected by tidal flooding and/or coastal erosion	No increase in number of marine operations and activities affected by tidal flooding and / or coastal erosion from the 'do nothing' policy.

SEA Objective	Features covered by the objective (following scoping)	Indicator	Target
To minimise coastal flood and erosion risk to critical infrastructure and maintain critical services.	<ul style="list-style-type: none"> • Motorways, A, B and minor roads (where linkage is a key issue) • Railway lines and stations • Airfields and aerodromes • International airports • Pumping stations, sewage works, wind turbines, quarries, existing power generating facilities (e.g. windfarms), substations • Access for emergency services 	Number of critical infrastructural assets at risk from tidal flooding and/or coastal erosion	No increase in number of critical infrastructural assets at risk from tidal flooding and/or coastal erosion from the 'do nothing' policy.
Land Use			
To minimise coastal flood and erosion risk to agricultural land and horticultural activities	Grades 1 – 3A Farmland	Grades of agricultural land at risk from tidal flooding and/or coastal erosion	No risk of flooding/tidal erosion to Grades 1 – 3a agricultural land.
Population			
To minimise coastal flood and erosion risk to people and residential property	<ul style="list-style-type: none"> • Isolated properties • Housing in coastal villages, towns and cities • Community 	Number of residential properties at risk from tidal flooding and/or coastal erosion	No increase in number of residential properties at risk of tidal flooding or coastal erosion from the 'do nothing' policy.
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.	<ul style="list-style-type: none"> • Key vulnerable community facilities (e.g. surgeries, hospitals, aged persons homes, schools, shops, churches, libraries, universities etc) • Key amenity facilities (e.g. public open space etc) • Key recreational facilities (e.g. golf courses, bathing beaches, formal promenades, national cycle routes, Country Parks, Public Rights of Way, Castles and Forts etc) • Access to community / amenity facilities 	Number of high value community, amenity and recreational facilities at risk of tidal flooding and/or coastal erosion	No increase in number of high value community, amenity and recreational facilities at risk of tidal flooding and/or coastal erosion from the 'do nothing' policy.
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.	Shops, offices, businesses, factories, warehouses, areas identified for regeneration, caravan parks, airports, stone and mineral extraction sites, military establishments and others key areas of employment	Number of industrial, commercial, economic and tourism assets at risk from tidal flooding and/or coastal erosion	No increase in number of industrial, commercial, economic and tourism assets at risk from tidal flooding and/or coastal erosion from the 'do nothing' policy.

SEA Objective	Features covered by the objective (following scoping)	Indicator	Target
To minimise coastal flood and erosion risk to MoD ranges.	<ul style="list-style-type: none"> MoD sites (including UK disposal sites Core sites and Firing Ranges) 	Number of MoD sites at risk from tidal flooding and/or coastal erosion	No increase in number of MoD sites at risk from tidal flooding and/or coastal erosion compared to the 'do nothing' policy.

15.7.3 The data collection and collation associated with the identification of existing impacts of coastal flood defences has been focussed on the objectives and the potential indicators associated with them. In addition, the identification of constraints and opportunities are also linked where possible to the objectives and indicators.

15.8 Cumulative Assessment

15.8.1 Cumulative impacts are those that result from incremental changes caused by other developments, plans or projects together with the proposed SMP. There are two main types of cumulative impact including:

- Combined effects of different types of impacts from the various policies within the plan on a particular receptor (also known as 'impact interactions'); and
- Effects from several policies, plans, or projects, which individually might be insignificant, but when considered together could give rise to significant cumulative effects.

15.8.2 The cumulative impact assessment will therefore identify whether there are cumulative impacts across the SMP policy units and management units that result in potentially significant negative impacts, and will examine how other policies, plans and projects could interact and result in cumulative impacts with the effects of the SMP policies.

15.9 Habitat Regulations Assessment

15.9.1 The need for Habitats Regulations Assessment (HRA) arises under the requirements of the EC Habitats Directive (92/43/EEC) and its implementation in Wales under IVA of the Habitats Regulations (The Conservation (Natural Habitats, & c.) (Amendment) (England and Wales) Regulations 2007). The procedure for the HRA is identified in regulation 85A-E in the 2007 Regulations. In summary the HRA must undertake an appropriate assessment of the implications of the SMP policies for the European Sites in view of their conservation objectives. Where policies are assessed as having or potentially having a significant adverse effect on the integrity of European Sites, either alone or in-combination, it must be shown that there are no alternative solutions to the policy, and if so shown, must be present a case for Imperative Reasons of Overriding Public Interest (IROPI). Subsequently, compensatory habitat would need to be secured within the SMP.

15.9.2 The natural environment of the West of Wales SMP2 is one of high conservation value with the potential of the shoreline management policies of the SMP2 to have an impact on European Sites which include SACs and SPAs (see **Table 9.1 and 9.4**). Thus, a HRA will be required to ensure that the selected policy options for shoreline management associated with each policy unit do not have any significant impact on European Sites, or that there are no alternative solutions and the policy is required as a result of IROP, and suitable compensatory habitat will need to be identified or included within the SMP actions.

15.10 Environmental Report

15.10.1 The reporting phase will entail the collation of all aspects of the process described in this scoping report, and presenting the findings in a clear, precise, exciting, informative and readable document. It will also provide presentational material that can be used to inform the public. The Environmental Report will present the process, scoping (including supporting background studies and surveys), and the assessment of the West of Wales SMP2, culminating in recommendations for ongoing work.

15.10.2 The Environmental Report will specifically provide:

- A non-technical summary;
- Introduction and background;
- Methodology (and consultation);
- Summary of purpose and objectives of the West of Wales SMP2;
- Objectives of the SEA (and prioritisation);
- Environmental baseline (including socio-economic aspects);
- Environmental and social issues relating to the West of Wales SMP2 area;
- Description of options examined and those rejected;
- Identification of environmental impacts of alternatives;
- Identification of possible mitigation measures;
- Identification of environmental impacts of the preferred options;
- Identification of possible mitigation measures of preferred options;
- Uncertainties and risks;
- Links to project specific plans and policies; and
- Proposals for monitoring.

16 THE NEXT STEPS

In this section, the consultation that will take place throughout the SEA process is described. Consequently, it outlines:

- The purpose of consultation and the methods used; and
- The manner in which feedback will be included into the SEA process.

16.1 Approach to Consultation

16.1.1 The consultation for this SEA will be based on an initial consultation period for the **Scoping Report** (this document), followed by a period of consultation for the draft SMP2, which will be supported by the information in the **Environmental Report** (and other documents).

16.1.2 This report represents the end of **step 1** of the consultation process, where consultation has been undertaken on the methodology, baseline, and draft assessment criteria for the strategic assessment of the SMP2 for West of Wales. The Draft Scoping Report was provided for four weeks of consultation to a wide audience, including the following:

- Pembrokeshire County Council;
- Ceredigion County Council;
- Powys County Council;
- Gwynedd County Council;
- Eryri National Park Authority;
- Pembrokeshire National Parks;
- Welsh Assembly Government;
- HENEB;
- Network Rail;
- Countryside Council for Wales;
- RCAHMMW;
- Dyfed Archaeology; and
- The Environment Agency Wales.

16.1.3 In addition, the **SEA Scoping Report** was made available to the public on the West of Wales SMP website (<http://www.westofwalesmp.org/>).

16.1.4 Following the consultation on **step 1**, this Scoping Report has been edited and refined. The changes to the Scoping Report are noted in the responses to comments provided in **Appendix E**, and the the baseline, methodology, and sustainability objectives presented in this final Scoping Report are to be used in the evaluation and assessment of SMP2 policies.

- 16.1.5 The key purpose of the Draft Scoping Report was to gain feedback from the various agencies listed above and also public consultees to address the following questions:
1. Has the scoping report correctly identified the environmental issues on the West of Wales coast? (i.e. are there additional issues which need to be addressed?).
 2. Has the baseline provided an appropriate level of detail to support the assessment?
 3. Do the assessment criteria provide an appropriate mechanism for the assessment of the environmental effects of the SMP2, and are they relevant to the coastline under examination?
 4. Is the suggested methodology considered robust and appropriate to the assessment of the environmental effects of the SMP2?
- 16.1.6 Once the SMP2 desired policies have been selected and offered in draft form for consultation, an **Environmental Report** will be provided that shows a detailed assessment of the selected scenarios and feasible alternatives. The **Environmental Report** will also include details of how the effects of the SMP2 will be monitored, and measured against the SEA objectives. The Environmental Report will be submitted for consultation alongside the draft SMP2, which constitutes **step 2** of the SEA consultation process. This is expected to occur in July 2010.
- 16.1.7 Following the **step 2** consultation, the SMP2 will be finalised, and a **Post-Adoption Statement** will be produced that will identify how public (and statutory agency) responses to the **Environmental Report** have been taken into account. If changes are required to the draft SMP2 following consultation, a revised **Environmental Report** will be presented for further consultation. This will constitute **step 3** of the SEA consultation process.

16.2 Key Issues Raised through Consultation

- 16.2.1 Key issues raised through the consultation process on the Draft Scoping Report are presented in **Appendix E** and will be fed into the SEA process.
- 16.2.2 Key issues from this consultation exercise will also be detailed in the **Environmental Report**.

Q 16.1 Are there any additional or specific consultees to whom the Environmental Report should be sent for comment?

REFERENCES

- CCW (2001). *Guide to Best Practice in Seascape Assessment*. Countryside Council for Wales.
- CCW (2006). *Sites of Special Scientific Interest (SSSIs) in Wales - Current state of knowledge Report for April 2005 – Mar 2006*. Countryside Council for Wales.
- Countryside Council for Wales, English Nature, Environment Agency, Royal Society for the Protection of Birds (2004). *Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners*.
- Defra (2004). *Guidance on SEA*. Department of Environment, Food and Rural Affairs.
- Defra (2006a). *Shoreline Management Plan Guidance Volume 1: Aims and Requirements*. Department of Environment, Food and Rural Affairs.
- Defra (2006b). *Shoreline Management Plan Guidance Volume 2: Procedures*. Department of Environment, Food and Rural Affairs.
- Defra (2006c). *FCDPAG3 Economic Appraisal: Supplementary Note to Operating Authorities – Climate Change Impacts*.
- Environmental Assessment of Plans and Programmes (Wales) Regulations 2004. <http://www.opsi.gov.uk/legislation/wales/wsi2004/20041656e.htm>
- FSA (2008). *Shellfish Harvesting Classifications England and Wales: 2008-2009*. Food Standard Agency. <http://www.food.gov.uk/foodindustry/farmingfood/shellfish>.
- Halcrow (2010). *North West England and North Wales SMP2 – Consultation Draft Strategic Environmental Assessment (SEA) Report*. On behalf of Blackpool Council.
- Haskoning (2009). *West Wales SMP2: Review of Coastal Processes and Geology (Introduction)*.
- Institute of Ecology and Environmental Management (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom*. <http://www.ieem.net/ecia/>.
- ODPM (2005a). *A Practical Guide to the Strategic Environmental Assessment Directive*. Office of the Deputy Prime Minister.
- ONS (2004). *2001 census*. Office of National Statistics. www.statistics.gov.uk/census2001/default.asp
- ONS (2007). *Key Population and Vital Statistics – Local and Health Authority Areas*. Series VS No. 33, PPI No. 21. Office of National Statistics.
- Walmsley S.A. and Pawson, M.G (2007). *The coastal fisheries of England and Wales, Part V: a review of their status 2005–6*. Sci. Ser. Tech Rep., Cefas Lowestoft, 140: 83pp.
- WAG (2002). *The National Waste Strategy for Wales*. Welsh Assembly Government.

WAG (2007). Welsh Coastal Tourism Strategy, draft final strategy document January 2007. Welsh Assembly Government.

WAG (2008a). The Wales Transport Strategy April 2008. Welsh Assembly Government.

WAG (2008b). One Wales: Connecting the Nation. The Wales Transport Strategy. G/MH/2589/04-08.

WAG (2009). Wales's Population: A Demographic Overview 2009. Welsh Assembly Government.

ABBREVIATIONS AND ACRONYMS

AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
Cadw	Welsh Historic Monuments
CCW	Countryside Council for Wales
Defra	Department for the Environment, Food and Rural Affairs
°C	Degrees Celsius
EAW	Environment Agency Wales
EC	European Commission
EIA	Environmental Impact Assessment
ER	Environmental Report
EU	European Union
GIS	Geographical Information Systems
Ha	Hectares
JNCC	Joint Nature Conservation Committee
km	Kilometre
km²	Kilometre squared (or 100ha)
LBAP	Local Biodiversity Action Plan
m	Metre
MNR	Marine Nature Reserve
NNR	National Nature Reserve
NTS	Non-Technical Summary
PPPs	Plans, Programmes and Policies
R&D	Research and Development
RBD	River Basin District
RDP	Rural Development Plan
SAC	Special Area of Conservation
SM	Scheduled Monument
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessment
SPA	Special Protection Area

SR	Scoping Report
SSSI	Site of Special Scientific Interest
UK	United Kingdom
UKCIP	UK Climate Change Impact Programme
WFD	Water Framework Directive
WHS	World Heritage Site
WAG	Welsh Assembly Government

GLOSSARY OF TERMS

Adapted from: http://www.environment-agency.gov.uk/commondata/acrobat/6_chapter_5_glossary_1388113.pdf

Area of Outstanding Natural Beauty (AONB)

Areas of Outstanding Natural Beauty (AONBs) have been were formally designated under the National Parks and Access to the Countryside Act of 1949 to protect areas of the countryside of high scenic quality that cannot be selected for National Park status due to their lack of opportunities for outdoor recreation (an essential objective of National Parks). The Countryside Agency is responsible for designating AONBs and advising Government and others on how they should be protected and managed. Further information on AONBs can be found at <http://www.aonb.org.uk/>

Biodiversity Action Plan (BAP)

An agreed plan for a habitat or species, which forms part of the UK's commitment to biodiversity. For further information consult the BAP website: <http://www.ukbap.org.uk>

Birds Directive

European Community Directive (79/409/EEC) on the conservation of wild birds. Implemented in the UK as the Conservation (Natural Habitats, etc.) Regulations (1994). For further information consult the HMSO website: http://www.hmso.gov.uk/si/si1994/Uksi_19942716_en_1.htm

Consultation Bodies

Authorities, which because of their environmental responsibilities are likely to be concerned by the effects of implementing, plans and programmes and must be consulted at specified stages of the SEA.

Environment Agency Wales

Non-departmental public body responsible for the delivery of government policy relating to the environment and flood risk management in Wales.

Environmental Appraisal

A form of environmental assessment used in the UK (primarily for development plans) since the early 1990s, supported by "Environmental Appraisal of Development Plans: A Good Practice Guide" (DoE, 1993); more recently superseded by sustainability appraisal. Some aspects of environmental appraisal foreshadow the requirements of the SEA Directive.

Environmental Impact Assessment (EIA)

Generically, a method or procedure for predicting the effects on the environment of a proposal, either for an individual project or a higher-level "strategy" (a policy, plan or programme), with the aim of taking account of these effects in decision-making. The term "Environmental Impact Assessment" (EIA) is used, as in European Directive 337/85/EEC, for assessments of projects. Both SEA and EIA are levels of environmental assessment – the former is undertaken at a strategic level and the later at project level.

Environmental Report (ER)

Document required by the SEA Directive as part of an environmental assessment, which identifies, describes and evaluates the likely significant effects on the environment of implementing a plan or programme.

Environmentally Sensitive Areas (ESA)

ESA schemes were introduced by the Ministry of Agriculture, Fisheries and Food (MAFF; predecessor to Defra) in 1987 and are designated under the provisions of sections 18 and 19 of the 1986 Agriculture Act and Environmentally Sensitive Area (Stage II) Designation (Amendment)(No2) Order 2001. They are governed by Defra and offer incentives (on a 10 year agreement with a 5 year break clause) to encourage farmers to adopt agricultural practices which would safeguard and enhance parts of the country of particularly high landscape, wildlife or historic value. Further detail can be found on Defra's website: <http://www.defra.gov.uk/erdp/schemes/esas/default.htm>

Fetch

The distance of sea over which the wind blows.

Flood Map

The Flood Map is the Environment Agency's public face map for floodplain information. It shows the Flood Zone extents, which ignore defences, the location of raised defences, and the area benefiting from defences. Available on the Environment Agency's website, it also provides information on the likelihood of flooding to general areas of land.

Freshwater Fisheries Directive Designation

EC Directive 78/659/EEC on the Quality of Fresh Waters Needing Protection or Improvement in order to Support Fish Life ('The Freshwater Fish Directive') aims to protect and improve water quality and forms part of the Environment Agency's water quality monitoring programme. Under the Directive the UK Government was required to designate two categories of water: those suitable for salmonids (waters that have the potential to support fish of the family Salmonidae, mainly salmon and trout but also grayling) and those suitable for cyprinids (from the family Cyprinidae plus pike, perch and eel). The Directive sets standards to safeguard freshwater fisheries, mainly relating to the quality of the water, and requires that certain designated stretches of water meet these standards in order to enable fish to live or breed. For further information please consult the website: <http://www.environment-agency.gov.uk/>

Geographical Information System (GIS)

A GIS is a computer-based system for capturing, storing, checking, integrating, manipulating, analysing and displaying data that are spatially referenced.

Groundwater

Water occurring below ground in natural formations (typically rocks, gravels and sands).

Indicator

A measure of variables over time, often used to measure achievement of objectives.

Land Use

Various designations of activities, developments, cropping types, etc for which land is used.

Land Management

Various forms of activities relating to agricultural, forestry, etc practice.

Local Authority Development Plans

These statutory land development plans generally cover a 10-year period from the date of their adoption.

Local Biodiversity Action Plan (LBAP)

A local agenda (produced by the local authority) with plans and targets to protect and enhance biodiversity and achieve sustainable development. We are committed to Biodiversity Action Plans and works with central government (Rio Earth Summit, 1992) to realise LBAP objectives.

Mitigation

Used in this SEA to refer to measures to avoid, reduce or offset significant adverse effects on the environment.

National Nature Reserve (NNR)

National Nature Reserves are designated under the National Parks and Access to the Countryside Act 1949 or the Wildlife and Countryside Act 1981 (as amended) primarily for nature conservation, but can also include sites with special geological or physiographic features. They were established to protect the most important areas of wildlife habitat and geological formations in Britain, and as places for scientific research. All NNRs are “nationally important” and are best examples of a particular habitat/ecosystem. NNRs receive SSSI designation under The Countryside and Rights of Way Act 2000 and The Wildlife and Countryside Act 1981 (as amended).

National Parks

Extensive tract of countryside designated under the 1949 National Parks and Access to the Countryside Act for reasons of its natural beauty and for the opportunities it affords for open air recreation. Designation supports the conservation and enhancement of its landscapes, wildlife and cultural heritage, and the promotion of understanding and enjoyment of its special qualities. For further information please consult the National Park Authorities website at <http://www.anpa.gov.uk/>

Objective

A statement of what is intended, specifying the desired direction of change in trends.

Ordnance Datum Newlyn

Ordnance Datum Newlyn (ODN) is a traditional vertical coordinate system, consisting of a tide gauge datum with initial point at Newlyn (Cornwall) and a Terrestrial Reference Frame observed by spirit levelling between 200 fundamental bench marks across Britain. Each bench mark has an orthometric height only (not ellipsoid height or accurate horizontal position). This coordinate system is important because it is used to describe vertical positions of features on British maps (for example, spot heights and contours) in terms of height above mean sea level. The word Datum in the title refers, strictly speaking, to the tide gauge initial point only, not to the national levelled bench marks.

Plan or Programme

The term “plan or programme” covers any plans or programmes to which the SEA Directive applies.

Ramsar Site

Internationally important wetland areas designated under the 1971 Ramsar Convention on ‘Wetlands of International Importance Especially as Waterfowl Habitat’. Further information can be located on the RAMSAR convention on wetlands website: <http://www.ramsar.org/>

Responsible Authority

The organisation which prepares a plan or programme subject to the Directive and is responsible for the SEA.

River Quality Objective (RQO)

Rivers and canals are monitored under the requirements of the Water Resources Act, 1991. This legislation empowered the Secretary of State for the Environment and for Wales to set Statutory Water Quality Objectives to secure specific water quality standards. To meet this requirement we, as the nominated statutory body, have introduced the River Quality Objective (RQO) classification system. Currently, RQOs are classified using a River Ecosystem (RE) Classification, which is based on a set of chemical water quality parameters defined within the EC Freshwater Fish Directive (78/659/EEC). There are five river ecosystem classes, from RE1 to RE5. The RQO classification system provides an indication of the water quality conditions that we would like to see in all significant rivers but there are no legal requirements directly connected with it. Instead the RQO system provides an indication of the 'ideal' quality of waters and thereby provides an indication of their relative importance. For further information consult the following website: <http://www.environment-agency.gov.uk>

Scheduled Monuments

To protect archaeological sites for future generations, the most valuable of them may be "scheduled". Scheduling is the process through which nationally important sites and monuments are given legal protection by being placed on a list, or 'schedule'

Scoping

The process of deciding the scope and level of detail of an SEA, including the environmental effects and alternatives which need to be considered, the assessment methods to be used, and the structure and contents of the Environmental Report.

Screening

The process of deciding whether a plan or programme requires SEA.

Shingle beach

A shingle beach is a beach which is armoured with pebbles or small to medium sized cobbles. Typically the stone composition may grade from characteristic sizes ranging from 2 to 200 millimeters in diameter.

Shoreline Management Plan (SMP)

Non-statutory plans to provide sustainable coastal defence policies (to prevent erosion by the sea and flooding of low-lying coastal land), and to set objectives for the future management of the shoreline. They are prepared by the Environment Agency and maritime local authorities, acting individually or as part of coastal defence groups.

Significant environmental effects

Effects on the environment which are significant in the context of a plan or programme. Criteria for assessing significance are set out in Annex II of the SEA Directive.

Site of Special Scientific Interest (SSSIs)

Nationally important sites forming a network of the best and most representative examples of our wildlife and geodiversity features. Selected and designated by Natural England and afforded protection under the Wildlife and Countryside Act 1981 (as amended).

Special Area of Conservation (SACs)

SACs are designated under European Communities Directive 92/43/EEC known as the 'Habitats Directive'. This requires the conservation of important, rare or threatened habitats and species across Europe.

Special Protection Area (SPAs)

SPAs are designated under the European Communities Directive 79/409/EEC, known as the 'Birds Directive', to conserve the habitats of certain migratory or rare birds.

Strategic Environmental Assessment (SEA)

Generic term used to describe environmental assessment as applied to policies, plans and programmes. In this report, "SEA" is used to refer to the type of environmental assessment required under the SEA Directive.

SEA Directive

European Directive 2001/42/EC "on the assessment of the effects of certain plans and programmes on the environment".

SEA Regulations

The regulations transposing the SEA Directive into law, namely The Environmental Assessment of Plans and Programmes Regulations 2004.

Strategic Flood Risk Assessment (SFRA)

A broad scale assessment of flood risk carried out by a unitary authority or district council. Such Documents are drafted so that proposed developments can be quickly appraised to Planning policy Guidance.

Structure Plan

A statutory plan comprising part of the Development Plan, prepared by County Councils or a combination of unitary authorities, containing strategic policies that cover key planning issues over a broad area and provide a framework for local planning.

Sustainability

Is a concept, which deals with mankind's impact, through development, on the environment. Sustainable development is 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987). It should also take account, for example, of the long-term demands for non-renewable materials.

Water Framework Directive (WFD)

European Community Directive (2000/60/EC) on integrated river basin management. The WFD sets out environmental objectives for water status based on: ecological and chemical parameters; common monitoring and assessment strategies; arrangements for river basin administration and planning; and a programme of measures in order to meet the objectives. For further detail consult the European Commission website: <http://europa.eu.int>

Wildlife & Countryside Act

The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife. The Wildlife and Countryside Act is divided into four parts:

- Part I is concerned with the protection of wildlife;
- Part II relates to the countryside and national parks (and the designation of protected areas);
- Part III covers public rights of way; and
- Part IV deals with miscellaneous provisions of the Act.

The designation of protected species is included in Schedules 1, 5 and 8 of the Act, which list protected birds, protected animals and protected plants, respectively.

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APPENDIX A KEY RELEVANT EXISTING POLICIES, PLANS AND STRATEGIES

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
European Context				
European Water Framework Directive	<ul style="list-style-type: none"> The Directive is intended to enhance waterways and wetlands throughout Europe, to make sure water is used in a sustainable way, to reduce water pollution and to lessen the effects of floods and droughts. Directive will establish a strategic framework for managing the water environment and provides a common approach to protecting and setting environmental objectives for all ground and surface waters and the promotion of sustainable water use. For surface water, the Directive requires that environmental objectives are based on the chemical and, more significantly, ecological status of the water body. For groundwater, quantitative and chemical objectives must be set. The Directive also requires that statutory strategic management plans be produced for each River Basin District (RBD). 	<p>Knowledge of, and access to, new information of the Directive (e.g. basin wide data on surface runoff), should help improve the information inventories held by Coastal Groups and integrated into current and future SMPs.</p> <p>The Directive should not be viewed as an over-arching coastal or coastal risk management plan. Instead, the Directive's principles should be clearly and substantively integrated into the West of Wales SMP2.</p>	<p>The SEA can strengthen the content of spatial plans associated with the Directive (such as River Basin Management Plans) in terms of the link between water and coastal cliff face processes and impacts.</p> <p>The requirements of the Directive relating to such issues as increased surface runoff and pollution should be reflected in the SEA.</p>	Impacts to coastal cliffs and associated landscapes including areas protected for their landscape importance and character.
European Habitats Directive	<ul style="list-style-type: none"> Maintain or restore designated natural habitat types, and habitats of designated species. Take appropriate steps to avoid degrading or destroying SACs. Linear structures (rivers/streams/hedgerows/field boundaries etc) that enable movement and migration of species should be preserved. 	Any plan or project likely to have a significant impact on a designated site should undergo an appropriate assessment of its implications for the conservation objectives of the site.	Ensure that the requirements of the Directive are reflected in the SEA.	Impacts or loss of designated natural habitat types due to changes in coastal management (e.g. managed realignment and loss of grazing marsh or mud flats) and natural coastal processes.
European SEA Directive	<ul style="list-style-type: none"> This directive, seeks to ensure that environmental considerations are attached to preparation and adoption of certain plans and projects which are likely to have a significant effect on the environment. The directive offers prescription on which plans and programmes should require the production of a formalised SEA. Provision of a high level of protection for the environment and the integration of environmental considerations into the preparation and adoption of certain plans. 	The objectives and policies of the West of Wales SMP2 should have regard for the sustainable solutions to shoreline management and the environment.	Ensure that the requirements of the Directive are reflected in the SEA approach/methodology undertaken for the West of Wales SMP2.	Impacts to the environment associated with shoreline management and natural coastal processes.

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
European Birds Directive	<ul style="list-style-type: none"> Protection, management and control of all species of naturally occurring birds. Take measures to preserve, maintain or re-establish a sufficient diversity and area of habitat. 	Objectives and policies of the West of Wales SMP2 should comply with the Directive.	Ensure that the requirements of the Directive are reflected in the SEA.	Impacts to the bird habitat associated with shoreline management and natural coastal processes.
EU Sustainable Development Strategy	<ul style="list-style-type: none"> Approved in 2006, the aim of the EU SDS is to identify and develop actions to enable the EU to achieve continuous improvement of quality of life both for future and current generations, through the creation of sustainable communities able to manage and use resources efficiently and to tap the ecological and social innovation potential of the economy, ensuring prosperity, environmental protection and social cohesion. The key theme are: <ul style="list-style-type: none"> Climate change and clean energy; Sustainable transport; Sustainable consumption and production; Conservation and management of natural resources; Public health; Social inclusion, demography, migration; and Global poverty and sustainable challenges. The cross cutting policies are : <ul style="list-style-type: none"> Education and training; Research and development; Financing and Economic Instruments; and; Communication, mobilising actors and multiplying success. 	Objectives and policies of the West of Wales SMP2 should take into the consideration the key themes and policies associated with the EU SDS. <div> </div> <p style="text-align: center;"> <i>Sustainable Development</i> (Source: http://www.ac-nancy-metz.fr/enseign/anglais/Henry/Sustainable.png) </p>	Ensure the SEA reflects the requirements of the EU SDS.	<p>In general: Impacts on the long-term sustainability of communities (e.g. settlements) and the natural environment.</p> <p>Key points:</p> <ul style="list-style-type: none"> - To limit climate change and its costs and negative effects to society and the environment. - To ensure transport systems meet society's economic, social and environmental needs whilst minimising their undesirable impacts on the economy, society and the environment - Halting the loss of biodiversity and contributing to a significant reduction in the world wide rate of biodiversity loss by 2010. - Improving management and avoiding overexploitation of renewable natural resources such as fisheries, biodiversity, water, air, soil and atmosphere, restoring degraded marine ecosystems. - To create a socially inclusive society by taking into account solidarity between and within generations and to secure and increase the quality of life of citizens as a precondition for lasting individual well-being. The Commission and Member States should work towards improving integrated water resources management, the marine environment and promoting integrated coastal zone management.

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
<p>EU Biodiversity Strategy</p>	<ul style="list-style-type: none"> On 4 February 1998, the European Commission adopted a Communication on a European Biodiversity Strategy. This strategy aims to anticipate, prevent and attack the causes of significant reduction or loss of biodiversity at the source. This will help both to reverse present trends in biodiversity decline and to place species and ecosystems, including agro-ecosystems, at a satisfactory conservation status, both within and beyond the territory of the European Union (EU). The Strategy is organised around four strategic themes and eight policy areas. There are also four thematic Action Plans developed for each of the following themes: <ul style="list-style-type: none"> Conservation of Natural Resources; Agriculture; Fisheries; and Economic Cooperation. 	<p>Objectives and policies of the West of Wales SMP2 should take into the consideration the key themes associated with the Biodiversity Strategy.</p>  <p><i>Peacock Butterfly, Island of Anglesey, West of Wales</i> (Source: http://www.anglesey.info/horses.htm)</p>	<p>Ensure the SEA reflects the requirements of the Biodiversity Strategy.</p>	<p>The overarching goals of the Biodiversity Strategy are described as:</p> <p>"to contribute to reverse present trends in biodiversity losses", and</p> <p>"to place species and ecosystems in a satisfactory conservation status both within and beyond the territory of the European Union".</p>
<p>European Spatial Development Perspective</p>	<ul style="list-style-type: none"> The European Spatial Development Perspective (ESDP) is based on the EU aim of achieving a balanced and sustainable development, in particular by strengthening economic and social cohesion. Key policies of the Perspective include: <ul style="list-style-type: none"> Development of a polycentric and balanced urban system, and strengthening of the partnership between urban and rural areas, so as to create a new urban-rural relationship. Promotion of integrated transport and communication concepts, which support the polycentric development of the EU territory, so that there is gradual progress towards parity of access to infrastructure and knowledge. Wise management of the natural and cultural heritage, which will help conserve regional identities and cultural diversity in the face of globalisation. 	<p>Objectives and policies of the West of Wales SMP2 should take into the consideration the key policies of the Perspective, in particular policy 3.</p>	<p>Ensure the SEA reflects the requirements of the Perspective, in particular policy 3.</p>	<p>Key policy options /issues:</p> <ul style="list-style-type: none"> - Preparation of integrated spatial development strategies for protected areas, environmentally sensitive areas and areas of high biodiversity such as coastal areas, and wetlands balancing protection and development on the basis of territorial and environmental impact assessments. - Protection of the soil as the basis of life for human beings, fauna and flora, through the reduction of erosion, soil destruction and overuse of open spaces. - Preservation and restoration of large wetlands which are endangered by excessive water extraction or by the diversion of inlets. - Concerted management of the seas, in particular preservation and restoration of threatened maritime ecosystems.

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
EU Thematic strategy for Protection and Conservation of the Marine Environment	<p>The Thematic Strategy lays down clear and operational guidelines on how to achieve “good environmental status” for all of the EU’s marine areas by 2021, so that people are able to benefit from seas and oceans that are safe, clean and rich in nature.</p> <p>The overall objective of the Strategy is to protect and restore Europe’s oceans and seas and ensure that human activities are carried out in a sustainable manner so that current and future generations enjoy and benefit from biologically diverse and dynamic oceans and seas that are safe, clean, healthy and productive.</p>	<p>Objectives and policies of the West of Wales SMP2 should comply with the Strategy to achieve good environmental status for marine areas of West of Wales.</p>	<p>Ensure the SEA reflects the requirements of achieving good environmental status for marine areas of West of Wales.</p>	<p>The marine environment is currently subject to a variety of threats, ranging from the loss or degradation of biodiversity and changes in its structure, loss of habitats, contamination by dangerous substances and nutrients and possible future effects of climate change.</p>
Bathing Water Quality Directive	<p>Sets binding standards for bathing water quality.</p>	<p>Where possible the West of Wales SMP2 policies should ensure that measures are prescribed to protect or restore the quality of bathing waters to BWD standards.</p>	<p>Ensure that the requirements of the Directive are reflected in the SEA.</p>	<p>Impacts to the bathing waters associated with shoreline management and natural coastal processes.</p>
National and Regional Context				
Conservation of Dynamic Coasts: A framework for managing Natura 2000	<p>The framework focuses on some issues affecting coastal Natura 2000 sites in the United Kingdom, especially flood management and the need to build on current approaches to coastal policy and management.</p> <p>The outcomes of the framework include:</p> <ul style="list-style-type: none"> - A better understanding of the role of flood defence measures in delivering the aim of the Habitats; - Directive on the coast of the UK; - A better appreciation of the application of the Habitats Directive amongst other Member States; - Stakeholders as a result of the two European workshops and; <p>Actions to promote management of coastal Natura 2000 sites to deliver favourable conservation status, taking forward the overall results of the project in the context of the issues of site boundary designation and promoting the development of a clear understanding of the concept of a coherent network in UK.</p>	<p>This report / framework promotes a more strategic approach to site management and the response to dynamic change. The proposed actions of the report will help to implement the Habitats and Birds Directives in the United Kingdom.</p> <p>The West of Wales SMP2 (as stated under European Context) should include the identification of appropriate compensation / mitigation sites in an adjacent to protected areas, as at present it is unlikely to deliver such a framework.</p>	<p>The SEA will incorporate strategic directions towards the management of Natura 2000 sites associate with the West of Wales SMP2.</p>	<p>Management of the natural environment regarding Natura 2000 sites associated with the coastal environment (e.g. impacts to designated sites due to natural coastal processes and management thereof example, coastal breaching, cliff erosion, cliff stabilisation, coastal squeeze, interruption of sediment supplies etc.).</p>

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
<p>Landscape Character Assessment: Topic Paper 9 – Climate Change</p>	<p>The paper outlines the process of understanding the potential interactions between climate change and landscape character of the UK. Direct impacts looked include landscape character changes such as flooding events, longer growing seasons, low river flows and losses to whole landscapes in response to sea level rises.</p>	<p>The impact of climate change such as sea level rises needs to be taken into consideration in the West of Wales SMP2 along with increased fluvial and tidal flooding on the chosen shoreline management policies (e.g. managed realignment).</p>  <p><i>Increased sea level rises</i> (Source: http://www.treehugger.com/20090831-katrina-flooding-alabama.jpg)</p>	<p>Ensure that the key issues associated with the impacts of climate change on landscape character discussed in the topic paper are reflected in the SEA.</p>	<p>Impacts of climate change on the three themes identified including the natural environment, land use and cultural heritage. For example, sea level rises and impacts on habitats/species, tourism and recreation or impacts of increased fluvial and tidal flooding on pollution runoff, cultural heritage and habitats.</p>

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
<p>The draft Marine Bill 2008</p>	<p>The draft Bill contains a variety of measures designed to improve the long term, strategic decisions about the management of the marine environment, and to simplify the systems used to manage marine resources. The draft Bill also contains measures to improve management of migratory and freshwater fisheries and to increase access to the coast.</p> <p>The measures cover the following:</p> <ul style="list-style-type: none"> - Creation of the Marine Management Organisation; - Marine planning; - Better licensing decisions; - Nature conservation; - Managing marine fisheries; - Reform of migratory and freshwater fisheries; - Enforcement; - Administrative penalties; and - Access to coastal land. 	<p>The key measures to improve the management of marine, freshwater and migratory fisheries, in line with the principles of sustainable development need to be taken into consideration in the West of Wales SMP2. In addition, the measures to deliver increased coastal access under the draft Marine Bill needs to be taken into consideration when developing the policy options for the West of Wales SMP2.</p>  <p><i>Common Dolphins, Pembrokeshire, West of Wales</i> (Source: http://news.sky.com/skynews/Home/Sky-News-Archive/Article/200806413411802?f=rss)</p>	<p>Ensure that the key measures of the draft Marine Bill are reflected in the SEA, in particular the protection of coastal access.</p>	<ul style="list-style-type: none"> - Climate change altering marine habitats. - Coastal erosion, flood risk, and habitat loss are all increasing (the coast is eroding at more than 25% of monitored sites in England and Wales). - Stocks of marine and migratory fish are low. The number of elvers returning to England and Wales has declined by 70% since the early 1980s (in Europe, this decline is >95%). Salmon stocks were classed as 'at risk' in 43% of principal salmon rivers in 2006. - Modern fishing methods may damage seabed habitats. - One in three people live near the sea and the coast is a popular and growing destination for holidays. <p>The National Assembly of Wales have identified the following issues associated with draft Marine Bill:</p> <ol style="list-style-type: none"> 1. The integration of marine spatial planning with other Welsh, UK and EU policies and the Wales Spatial Plan; 2. The extension of Welsh territorial waters. 3. Planning and licensing arrangements for offshore power generation and the Welsh Assembly. Government's position on the devolution of further powers. 4. The role and functions of the Marine Consents Unit and its interaction with other licensing bodies. 5. The functioning and transparency of the appeals procedure. 6. The roles of the MMO and Welsh Assembly Government in delivering marine management and licensing. 7. The role and effectiveness of Marine Conservation Zones and conservation orders. 8. The role of statutory powers in creating coastal access in Wales.

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
				<p>9. The relationship between the Draft Marine Bill and the proposed Waste Management and Environmental protection Legislative Competence Order.</p> <p>Recommendations have also been provided by the National Assembly of Wales (see http://www.assemblywales.org/index.htm).</p>
<p>Environment Strategy for Wales and its Action Plan 2006</p>	<p>The purpose of the Environment Strategy for Wales is to provide the framework within which to achieve an environment which is clean, healthy, biologically diverse and valued by the people of Wales. By 2026, there is vision to see the Welsh environment thriving and contributing to the economic and social wellbeing and health of all of the people of Wales.</p> <p>The Strategy is supported by an Action Plan, which details specific actions aimed at delivering the vision and outcomes set out in the Strategy.</p>	<p>The West of Wales SMP2 needs to take into account the impact of such issues as sea level rises on the environment in regards to the ability of the chosen shoreline policy options to combat such environmental concerns.</p>	<p>Ensure that all relevant outcomes and indicators associated with the Strategy (and Action Plan) are reflected in the SEA.</p>	<p>Many activities, which are important in their own right, put pressure on the Environment of Wales, including:</p> <ul style="list-style-type: none"> • Transport; • Agriculture, fisheries and forestry; • Industry and commerce • Energy use; and • Construction and development. <p>As a result of these pressures, the environment of Wales faces a number of key challenges:</p> <ul style="list-style-type: none"> • Climate change and sea level rise; • Unsustainable resource use; • Degraded ecosystems; • Loss of biodiversity; • Loss of landscape and heritage quality and distinctiveness; • Poor quality local environments; and • Environmental hazards.

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
<p>The State of the Welsh Environment 2003</p>	<p>Although the Environment Report is not a plan, it does provide recommendations (see below), and outlines key relevant issues associated with the environment of Wales (see Key Relevant Issues).</p> <p>Urgent recommendations of relevance to the West of Wales SMP2:</p> <ul style="list-style-type: none"> - Review the Climate Change Strategy for Wales to ensure that WAG and Agencies 2004 appropriate adaptation and mitigation measures are promoted and funded; - Investigate the opportunities for adapting land use practices WAG and Agencies On-going particularly in the uplands to mitigate against flooding in the lowlands; - Minimise developments in floodplains; and fund and support landscape-scale restoration projects WAG, 2004 on encompassing habitats, species and access. 	<p>The West of Wales SMP2 needs to take into account the concerns of sea level rise and associated impacts on habitats (e.g. saltmarsh) in response to the potential for coastal squeeze.</p>  <p><i>Tidal surge, March 10 2008 – Abereddi, West Wales</i></p>	<p>Ensure that the key issues identified in the environment report are reflected in the undertaking of SEA. Adequate information should be provided or generated in the SEA for the HRA to evaluate the impacts of sea level rise on the policy options and adjacent Nature 2000 sites.</p>	<p>Key environmental issues identified in the Environment Report include:</p> <ul style="list-style-type: none"> - Loss of coastal vegetation to urban, industrial and agricultural development. - Cliff-top grasslands being abandoned by farmers so that the lack of grazing led to scrub encroachment. - Sand dune systems we re becoming over-stable because of vegetation development, causing a decline of certain rare species. - A new review of coastal soft cliffs in Wales has shown that many are under threat. This habitat is of major importance for terrestrial invertebrates such as the only populations in the UK of the mason bee, <i>Osmia xanthomelana</i>. - Coastal defences, which can have a major impact on natural coastal processes, border some 29% of the Welsh coastline. They are having a major impact on the coastal landscape of Wales. Such structures prevent coastal habitats, such as mudflats and saltmarsh from developing further inland to make-up for the losses that occur when sea levels rise and inundate existing habitat. <p>Note: Some of these are currently being addressed since the report was published including for example, the Welsh Assembly Government and Local Authorities have been advised on making coastal defences more environmentally acceptable.</p>

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<p>The Sustainable Development Action Plan 2004-2007</p>	<p>The Sustainable Development Action Plan (SDAP) is divided into four areas reflecting the key issues that face Wales and the areas where the Assembly Government can make most difference. All these issues must interact and be taken forward coherently to deliver a more sustainable future. Where no specific milestones are set, the actions will be completed by 2007.</p> <ol style="list-style-type: none"> 1. Living Differently: Addressing the major structural issues for sustainable development – energy, settlements, natural environment, and production and consumption; 2. Leadership and Delivery: Creating governance structures and a civil society that can deliver sustainable development; 3. Making our money talk: Making sure the Assembly and other public sector spending is focused on delivering sustainable development; and 4. Measuring our progress: Testing us against new indicators and reporting on progress. 	<p>The selected policy options of the West of Wales SMP2 needs to take into consideration the issue of sustainable development and the what the SDAP attends to address along the shoreline of the West of Wales, for example management of diffuse source pollution (see Key Relevant issues).</p>	<p>Ensure key issues identified in the SDAP related to the natural environment are reflected in the SEA.</p>	<p>Key issues which the SDAP will address:</p> <ul style="list-style-type: none"> - Ensuring that our developing policies on farming, forestry and the countryside, help to conserve the carbon stored in Welsh soils. - Formally appraise a revised transport framework for Wales against our sustainable development framework. - Encourage National Park Authorities to work with developers to provide small scale, low cost, sustainable housing, within National Parks. - Use the introduction of the Strategic Environmental Assessment integrated with Sustainability Appraisal for development plans to ensure wider area issues and linkages are properly addressed. - Wales has marine waters rich in biodiversity, improved river quality and much improved air quality. A key remaining challenge is from diffuse sources of pollution such as the collective contribution from agriculture and transport. Thus, a key action on diffuse pollution will be implemented, as a requirement under the Water Framework Directive, consulting on the issue as it relates to agriculture. - Implement our woodlands strategy, so that by 2023 50% of the National Assembly's Woodlands will have converted from clearfelling to continuous cover. <p><i>[For other action plan issues see the SDAP]</i></p>

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<p>People, Places, Futures: Wales Spatial Plan (Update) 2008</p>	<p>The Wales Spatial Plan, People, Places, Futures – was originally adopted by the National Assembly for Wales in November 2004. This Update brings the Wales Spatial Plan into line with One Wales, and gives status to the Area work which has developed over the last two years.</p> <p>The broad 20 year agenda and overall role, purpose and principles of the Wales Spatial Plan remain unchanged:</p> <ul style="list-style-type: none"> - Making sure that decisions are taken with regard to their impact beyond the immediate sectoral or administrative boundaries and that the core values of sustainable development govern everything we do; - Setting the context for local and community planning; - Influencing where money is spent by the Welsh Assembly Government through an understanding of the roles and interactions between places; and - Providing a clear evidence base for the public, private and third sectors to develop policy and action. <p>Key issues are associated with five themes:</p> <ol style="list-style-type: none"> 1. Building Sustainable Communities; 2. Promoting a Sustainable Economy; 3. Valuing our Environment; 4. Achieving Sustainable Accessibility; and 5. Respecting Distinctiveness. 	<p>The West of Wales SMP2 needs take into consideration the associated spatial themes of the Plan including:</p> <ol style="list-style-type: none"> 1. The Vision; 2. Building Sustainable Communities; 3. Promoting a Sustainable Economy; 4. Valuing our Environment; 5. Achieving Sustainable Accessibility; and 6. Respecting Distinctiveness. <p>The West of Wales SMP2 also needs to take into consideration the Wales Spatial Plan Area Strategies for North West Wales, Central Wales and Pembrokeshire – The Haven.</p> <p>Note 1: A Colwyn Bay Coastal Defence Strategy has been identified in the Plan which sets out strategic assessment and proposals for coastal defence measures to protect the landward side of the coast which contains the main Trans European Network road and rail links across North Wales along the Conwy coastal belt.</p> <p>Note 2: The Heads of the Valleys programme is providing targeted support to regenerate the least well-off areas of the Capital region, including the key settlements of Merthyr Tydfil and Ebbw Vale, linked to the duelling of the A465 Heads of the Valleys road.</p>	<p>The SEA will ensure the key environmental issues are addressed. However, the SEA should also highlight or successfully incorporate the theme of Respecting Distinctiveness.</p>	<p>- Future flood risks and coastal erosion present a significant economic threat to some of the key economic centres of West of Wales and the capacity of utility provision continues to pose a barrier to economic growth in certain parts of the region.</p> <p>- Adapting and responding to climate change both in terms of challenges and opportunities for West of Wales (flood risk, carbon capture / offset, coastal erosion, renewable energy).</p> <p>- Achieving sustainable use of our resources, including waste, water, soils, minerals, aggregates and land for food production.</p> <p>- Conserving and enhancing our ecosystems and increasing the resilience of biodiversity to the impacts of climate change.</p> <p>- Improving the local environment, including the built environment, and access to the coast and countryside, and prioritising the development of brownfield sites.</p> <p>- Promoting environmental education and skills development in the Area to maximise the emerging environmental opportunities and technologies.</p> <p>- Respecting distinctiveness: preserving the uniqueness of Wales including the Welsh language and cultural heritage.</p> <p>- Developing integrated network facilities to improve sustainable waste management practices in West of Wales.</p>

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<p>One Wales: Connecting the Nation The Wales Transport Strategy 2008</p>	<p>The goal of One Wales: Connecting the nation is to promote sustainable transport networks that safeguard the environment while strengthening the country's economic and social life. The transport strategy identifies a series of high-level outcomes and sets out the steps to their delivery.</p> <p>Five key areas have been identified where substantial progress is required:</p> <ol style="list-style-type: none"> 1. Reducing greenhouse gas emissions and other environmental impacts; 2. Improving public transport and better integration between modes; 3. Improving links and access between key settlements and sites across Wales and strategically important all-Wales links; 4. Enhancing international connectivity; and 5. Increasing safety and security. 	<p>The West of Wales SMP2 needs take into consideration the impacts of the selected policy options on transport infrastructure such as railways and roads between settlements to maintain connectivity and minimise the affects of isolation.</p>  <p><i>Tidal surge and railway infrastructure</i> (Source: http://knowledge.allianz.com/nopi_downloads/images/sorm_devon_train_z.jpg)</p>	<p>Ensure that the SEA incorporates the potential impacts of transport loss and associated impacts on the community.</p>	<p>The Strategy needs to consider the likely impacts of climate change on transport infrastructure. These may include flash flooding, due to heavy rain, increased river and coastal flooding and erosion, high temperatures in summer and the loss of habitats and species. Transport infrastructure will need to be resilient to these impacts in particular those transport routes which follow the shoreline. Transport infrastructure can also contribute to climate adaptation strategies – for example using roads as barriers in flood protection schemes.</p> <p><i>[See objectives of the Strategy for other issues]</i></p>
<p>Wales Biodiversity Framework 2007</p>	<p>The Wales Biodiversity Framework has been created by the Wales Biodiversity Partnership (WBP) as a first-step guide to:</p> <ul style="list-style-type: none"> - Identifying the key practical, policy and legislative drivers for protecting, restoring and enhancing biodiversity in Wales; - Outlining the mechanisms for promoting positive action; - Explaining the roles & remit of those responsible for undertaking biodiversity action; and - Providing links to the tools and information to help maintain and improve biodiversity in Wales. 	<p>The West of Wales SMP2 needs to take into consideration actions for biodiversity as set out in the Environment Strategy (see Annex A) in particular those actions associated with coastal habitat. For example, Integrated Coastal Zone Management – a new Wales strategy on ICZM has been produced which will be reviewed in July 2010 with a new action plan to be developed to take the ICZM processes further forward (Action 47).</p>	<p>Ensure that the specific actions of the framework are reflected in the SEA. For example, bringing designated sites into favourable or recovering condition through a suite of measures aimed at delivering more sympathetic management (Action 32).</p>	<ul style="list-style-type: none"> - Construction and development - housing, roads, commercial, industry, flood defences and energy infrastructure; - Increasing energy use, transport and travel activities; - Inappropriate land management including under-grazing and overgrazing; - Atmospheric, soil and water pollution; - Increased demand on water supply; - Inappropriate forestry operations; - Invasive species; - Over fishing and unsustainable bait collection; - Recreational pressure such as use of off-road vehicles; and - Impacts of climate change on biodiversity and habitats.

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Achieving Our Potential: A Tourism Strategy for Wales 2000	<p>The vision is supported by the following strategic objectives:</p> <ol style="list-style-type: none"> 1. To market Wales more effectively as an attractive all year round tourism destination; 2. To exceed the expectation of visitors to Wales by providing high standards and ensuring that investment to tourism is responsive to their changing needs; 3. To improve professionalism and innovation by enhancing the profile of the industry and by enhancing skills, training and motivation within the industry; and 4. To embrace a sustainable approach to tourism development which benefits society, involves local communities, and enhances Wales' unique environmental and cultural assets. 	<p>The selected policy options of the West of Wales SMP2 need to take into consideration how such options may influence tourism along the shoreline of West of Wales.</p>	<p>The SEA will ensure the key environmental receptors beneficial for the tourism of Wales are assessed.</p>	<ul style="list-style-type: none"> - Improvement in the quality of the coastal environment including bathing waters for the benefit of the local community and visitors. - Impacts of climate change on flora and fauna, habitats and landscapes and associated implications to tourism of Wales. - Development of sustainable tourism.
Climate Change Strategy Consultation Document 2009	<p>The Climate Change Strategy Consultation Document sets out the Assembly Government's policy intentions in relation to climate change and expands on the commitments set out in <i>One Wales</i>. It sets out the challenge for Wales, targets and the areas which require detailed action.</p> <p>The Strategy will be followed in the early part of 2010 by a consultation on a programme of action on climate change which will contain proposals for specific actions.</p>	<p>The impact of climate change such as sea level rises needs to be taken into consideration in the West of Wales SMP2 along with increased fluvial and tidal flooding on the chosen shoreline management policies (e.g. managed realignment). Adaptation strategies to rising sea levels for settlements along the West of Wales shoreline also needs to be taken into consideration as alternatives to improvements or changes in coastal defences.</p>	<p>Ensure that the key issues associated with the impacts of climate change on flora and fauna and landscape are reflected in the SEA.</p>	<ul style="list-style-type: none"> - An increase in flash flooding due to heavy rain and an increase in river and coastal flooding and erosion; - Increased pressure on sewer systems; - Increase in winter storm damage; - Change in habitats and species; - Changes to the landscape; - Summer water shortages and increased incidence of low river flows (coupled with higher demand); - Increased risk of subsidence in subsidence prone areas; - Increased thermal discomfort in buildings; and - Health problems in summer, including heatrelated deaths linked to high air pollution.
Climate Change Wales – Learning to Live Differently 2001	<p>The report describes ways in which the community of Wales can adapt to a changing climate.</p>	<p>Adaptation strategies to rising sea levels, fluvial flooding for settlements, infrastructure, and community along the West of Wales shoreline needs to be taken into consideration in the West of Wales SMP2.</p>	<p>Ensure that the key issues associated with the impacts of climate change on the community of West of Wales is reflected in the SEA.</p>	<ul style="list-style-type: none"> - Adapting to a changing climate; and - sustainable living.

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Tan 14 – Coastal Planning	Specific guidance which covers recreational development, heritage coast, shoreline management plans and coastal defence survey works.	Ensure that the key issues and guidance of Tan 14 is reflected in the SMP2.	Ensure that the key issues and guidance of Tan 14 is reflected in the SEA.	The guidance details a number of issues which must be taken into account because of their potential effects on physical processes and ground conditions, as well as the overall balance, sensitivity and conservation of the area. These include visual impact from both land and sea, and the potential need for remedial and defence works. It covers planning considerations and issues to be included in development plans and in the determination of planning applications. Consideration is given to the need for conservation and protection of designated marine and coastal sites.
Tan 15 – Development and Flood Risk	Guidance is given on flooding as a material consideration in development control decisions, runoff and increasing the risk of flooding on or off site, coastal protection works and flood defence works.	Ensure that the key issues and guidance of Tan 15 is reflected in the SMP2.	Ensure that the key issues and guidance of Tan 15 is reflected in the SEA.	Flood risk considerations should always be taken into account by local planning authorities in preparing development plans and in determining planning applications.
Tan 5 – Natura Conservation and Planning	This TAN gives advice on development control issues for Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and Sites of Special Scientific Interest (SSSIs). It also covers the selection and designation of non-statutory nature conservation sites, such as local nature reserves, and the protection of species, commons and greens.	Ensure that the key issues and guidance of Tan 5 is reflected in the SMP2.	Ensure that the key issues and guidance of Tan 5 is reflected in the SEA.	Development control issues for Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and Sites of Special Scientific Interest (SSSIs).

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Local Context: County and District/Borough Plans				
<p>The Isle of Anglesey Local Development Plan (LDP) 2006-2021</p>	<p>The vision of the Isles of Anglesey LDP is to make Anglesey “the Island of Choice” by:</p> <ol style="list-style-type: none"> 1.Promoting a sustainable economy and using the proximity to Ireland and extensive coastline to provide the foundation for the economic prosperity of residents; 2.Ensuring that development respects the character of the environment and fosters sustainable communities, both urban and rural; 3.Retaining younger people to maintain an age-balanced population, and to safeguard the Welsh language; and 4.Enhancing the high quality natural environment, distinctive heritage and culture. 	<p>The following are policies related to the Plan which may influence the policy options of the West of Wales SMP2:</p> <p>Policy TAI 1—Growth Range for New Dwellings: Provision will be made for a minimum of 2500 to 3,000 dwellings over the period 2006-2021 along with further approvals that may be required to meet the local housing needs for market housing. Delivery of the planned level of housing will depend on appropriate infrastructure being available to support the new housing development.</p> <p>Policy TAI 2—Strategic Housing Sites in Main Centres and hubs Land has been identified in the Main centres and hubs for some 700 dwellings on the following strategic housing sites:</p> <p>Llangefni and the Menai hub</p> <ul style="list-style-type: none"> • Land at Ty'n Coed new allocation 200; and • Llangefni ‘master plan’ area new allocation 100. <p>Holyhead</p> <ul style="list-style-type: none"> • Land opp Parc Cybi new allocation 200; • Land at Yr Ogof existing allocation (UDP) 50; and • Tyddyn Bach existing consent 120. <p>Amlwch</p> <ul style="list-style-type: none"> • Porth Amlwch new allocation 50 (subject to h&s consultation). <p>The following sites have been identified as offering further potential for strategic housing sites providing up to another 500 units:</p> <ul style="list-style-type: none"> • Holyhead waterfront development new allocation 200; • Gaerwen — land between Gaerwen Uchaf and Chapel Street new allocation 200; and • Amlwch — land between Lôn Bach and Maes Môn new allocation 150. 	<p>The SEA should incorporate any issues related to the shoreline of Anglesey assessed in the SEA undertaken for the LDP. The SEA should also ensure that the key issues associated with the environment addressed in LDP are also reflected in the SEA.</p>	<p>The following key issues are identified as having an impact on the land use strategy of the emerging LDP:</p> <ul style="list-style-type: none"> – A focus in national spatial policy on the primary Menai hub, a secondary hub at Holyhead and local catchment at Amlwch as part of the spatial policy framework for North West Wales. – Responding to the work of the Môn-Menai Delivery Board and the effort to strengthen the economy of Anglesey and North West Wales. – Strengthening the rural economy through integrated rural action. – Making the most of the Môn-Menai coastline while protecting its special environmental qualities. – Taking best advantage of European and other funding to help secure a sustainable future for local communities. – Responding to environmental challenges (e.g. climate change) while protecting and promoting the Island’s extensive coastline, special environmental qualities and designated sites. – Being sensitive to the linguistic patterns and cultural characteristics of the Island. – Recognising that Anglesey’s strategic location near to Ireland could deliver relative advantages for the economy and cultural links. – Working with other local authorities to deliver shared priorities in transport, minerals, waste and housing provision.

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<p>Anglesey AONB Management Plan Review 2009</p>	<p>The socio-economic character of the Anglesey AONB has been derived from analysis of the 2001 Census data. The Management Plan Review has divided the AONB into four Sub-Areas numbered one to four which take into consideration the following:</p> <ul style="list-style-type: none"> - SOCIO-ECONOMIC CHARACTERISTICS OF THE ANGLESEY AONB; - THE TOURISM SECTOR; - AGRICULTURE; - ENVIRONMENTAL QUALITY. 	<p>The Anglesey AONB Management Plan ensures the integrity of the AONB is maintained as a national interest. As such, this Plan should be used to guide and inform all other plans such as the West of Wales SMP2 and activities developed by public bodies that may affect the AONB such as coastal defences.</p>	<p>Ensure that the key issues associated with the management of the Anglesey AONB are reflected in the SEA.</p>	<p>Climate change is a key issue influencing the AONB.</p> <p>Many habitats of the ANOB are in unfavourable condition: Areas of coastal wet and dry heathland are generally recorded as in an unfavourable and declining condition. Coastal grassland is recorded as generally unfavourable but recovering and some areas of dry calcareous heath are in favourable and recovering condition. The main issues affecting the condition of these habitats are undergrazing, agricultural operations and lack of remedial management and burning on the dry heaths.</p> <p>Global economic factors influence the AONB, in particular relation to agricultural management. Without guidance and appropriate agrienvironment support this could lead to further degradation of valued habitats (that now lie outside agricultural management systems) through lack of management and increased intensification of farming on adjacent land.</p> <p>Challenges of housing development needs and roads and traffic; wildlife loss and habitat loss are also major issues in the management of the AONB.</p>
<p>Anglesey's Local Biodiversity Action Plan</p>	<p>The Anglesey's LBAP aims to secure partnership work between local people and organisations to ensure these local resources are valued and looked after in the future.</p> <p>The action plan sets out work to be undertaken to help important habitats and species and is currently undergoing a review for 2010-2015.</p>	<p>It is important that the targets associated with the LBAP for Anglesey's is integrated into the work of initiatives that have an influence on biodiversity conservation including SMPs.</p>	<p>No major influences on the SEA as the LBAP and SEA both complement each others objectives regarding the protection of local biodiversity.</p>	<p>Impacts of coastal development on the following:</p> <ul style="list-style-type: none"> - Coastal and floodplain grazing marsh; - Saline lagoons; - Dunes; - Fens and heathlands; and - Sandy beaches.

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<p>The Ynys Môn (Anglesey) Catchment Abstraction Management Strategy Consultation Document 2006</p>	<p>The vision for the CAMS is a shared strategy for the sustainable management of water resources within Anglesey.</p> <p>This will be achieved by making more information of water resources and licensing practice publicly available and allow the balance between the needs of abstractors, other water users and the aquatic environment to be considered in consultation with the local community and interested parties.</p> <p>There are 2 Water Resource Management Units (WMRUs) associated with Anglesey.</p>	<p>Changes in water regime could potentially affect the designated sites and it is unclear how these changes in water level would impact upon the chosen policies for shoreline management.</p> <p>WMRU1 has 'Water Available Status' and WMRU2 has 'No Water Available' status. However all units will have a long-term 'No Water Available' status (2013 and 2019).</p>  <p><i>Cefni Dam</i> (Source: Anglesey CAMS, 2006)</p>	<p>The SEA should ensure that water dependent sites are identified and policy assessment is focussed on the potential impact. Also potential opportunities for enhancement of sites and expansion of sites.</p> <p>Key SSSIs associated with WMRU1 – Werthry, Llyn Traffwl, Bodffordd and Salbri.</p> <p>Key SSSIs associated with WMRU2 – Llyn Alaw, Nantanog, Llyn Llywenan, Cors y Farl, Caeau Talwrn and Corsydd Mon SAC/RAMSAR.</p>	<p>Although coastal situations usually fall outside the CAMS processes, there may be the issue of decrease in ground water or surface water recharge for designated sites or impact upon the structural geology of coastal cliffs.</p> <p>The unit with boundaries closest to the shoreline is WMRU 1 which extends towards Holyhead and Rhosneigr.</p>

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<p>Ceredigion County Council Preferred Strategy Local Development Plan Consultation 2007 - 2022</p>	<p>The LDP is a statutory plan and will set out policies and specific proposals for the development and use of land in Ceredigion for approximately 15 years; up to 2022. Up to 18 objectives have been established for the LDP including those associated with environment and climate change for example:</p> <p>Objective 11: To conserve and enhance Ceredigion's landscape encompassing the visual, historic, geological, ecological and cultural environments</p> <p>Objective 12: To prevent loss of and enhance biodiversity and its connectivity across Ceredigion, with particular regard for local priority species and habitats, whilst improving the enjoyment and understanding of biodiversity by encouraging access to sites of conservation interest, providing their ecological integrity can be safeguarded.</p> <p>Objective 13: To encourage a sustainable approach to developments in the coastal zone while protecting the heritage and physical environment.</p> <p>Objective 14: To protect and manage Ceredigion's natural resources, including soil, air, water and geodiversity, in order to maintain and enhance their value for today and future generations.</p>	<p>The West of Wales SMP2 needs to take into consideration the key policies of the LDP including the following:</p> <p>Policy 2: Housing and Economic Growth The LDP will facilitate housing and economic development to meet projected growth. Current projections indicate that approximately 5,900 new homes and 3000-4000 new jobs could come forward over the plan period.</p> <p>Policy 3: Urban Service Centres (USCs) The local, countywide and regional role of the Urban Service Centres (see Section 8, Table 2 of the LDP) will be recognised and enhanced through:</p> <ul style="list-style-type: none"> • Providing for 50-55% of housing growth to assist in meeting the general needs of the County for urban areas like Aberystwyth; • Providing a focus for large scale developments (incl. housing, employment, retail, community, education, recreation and leisure) which are needed to meet countywide/ sub-County and local needs; • Allocating land to ensure development can come forward for specific uses, along with ensuring some opportunity exists for development on non-allocated sites; and • Maximizing the re-use of existing buildings and brownfield site. <p>Policy 4: Rural Service Centres (RSCs) The role of Rural Service Centres (see Section 8, Table 2 of the LDP) in supporting large rural parts of Ceredigion will be enhanced and delivered through for example by providing for 25-30% of housing growth to assist in meeting their needs and those of the surrounding area.</p>	<p>The SEA should incorporate any issues related to the shoreline of Ceredigion assessed in the SEA undertaken for the LDP. The SEA should also ensure that the key issues associated with the environment addressed in LDP are also reflected in the SEA.</p>	<p>The Key Issues for Ceredigion can be identified within several themes as follows:</p> <ul style="list-style-type: none"> - Level and type of growth including adequate supply of land for economic development where the nature of the expected development calls for the provision of employment sites. - Distribution of growth/development including the need to ensure that the distribution of growth contributes to a clearer emphasis on local connections, with good access to essential services and facilities. - Form of growth. - Community. - Welsh Language. - Environment and Climate Change including the need for the identification and protection of the most important features of the landscape, geodiversity and biodiversity through appropriate designations and ensuring that wherever possible, development makes a positive contribution to biodiversity and visual amenity. - Infrastructure and Services including where climate change leads to a need to reassess the sustainability of existing infrastructure, the implications of this for development will need to be considered (e.g. rising sea-levels and managed retreat).

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		<p>Policy 6: Development in the Open Countryside Development outside of the defined settlements (see Section 8, Table 2 of the LDP) will only be permitted where it is in line with national guidance.</p> <p>Policy 7: Affordable Housing In terms of Affordable Housing the LDP will deliver 700 affordable homes on general housing and exceptions sites.</p> <p>Policy 10: Tourism Accommodation The LDP will address tourism accommodation by allowing and encouraging accommodation development such as hotels and camping development sites.</p> <p>Policy 19: Development in the Coastal Zone Development in the coastal zone (to be defined) will only be permitted if:</p> <ol style="list-style-type: none"> 1. It can be demonstrated that a coastal location is required; 2. That it would not rely on extensive engineering works to protect the proposed development site; and 3. That applications for new coastal defences should consider all potential environmental effects. <p>Policy 24: Transport Provision Ceredigion will seek to promote more sustainable modes of transport, whilst reducing the use and impact of private motorcars by:</p> <ol style="list-style-type: none"> 1. Ensuring as far as is practical, that all development should maximize the use of alternative transport measures including walking and cycling; 2. Designating land for transport interchanges including park and ride and park and share sites, for freight parking and for highway network enhancements throughout the county, 		

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
		<p>as and where required in accordance with the RTP;</p> <p>3. Agreeing appropriate parking standards in new developments on the basis of Supplementary Planning Guidance; and</p> <p>4. Safeguarding former railway lines and associated railway landholdings for potential sustainable transport and interchange development as indicated in the RTP.</p> <p><i>[For detailed policy information, see Section 9 of the LDP]</i></p>		
Ceredigion Local Biodiversity Action Plan 2002	<p>The Ceredigion Local Biodiversity Action Plan (LBAP) covers the area within the County of Ceredigion, including the inshore waters and seabed to 12 miles offshore around the Ceredigion coast.</p> <p>The LBAP provides a framework for local biodiversity action that will contribute to the delivery of national targets for key habitats and species, and the raising and awareness and understanding of the relevance of the biodiversity to the people of Ceredigion.</p>	<p>It is important that the LBAP is integrated into the work of initiatives that have an influence on biodiversity conservation including SMPs.</p>	<p>No major influences on the SEA as the LBAP and SEA both complement each others objectives regarding the protection of local biodiversity.</p>	<p>- Loss and fragmentation of Upland Mixed Ashwood;</p> <p>- Inappropriate, of lack of woodland management;</p> <p>- Loss of genetic integrity;</p> <p>- Invasive alien species; and</p> <p>- Climate change.</p>
The North Ceredigion Catchment Abstraction Management Strategy 2008	<p>The vision for the CAMS is a shared strategy for the sustainable management of water resources within Anglesey. This will be achieved by making more information of water resources and licensing practice publicly available and allow the balance between the needs of abstractors, other water users and the aquatic environment to be considered in consultation with the local community and interested parties.</p> <p>There are 3 Water Resource Management Units (WMRUs) associated with North Ceredigion.</p>	<p>Changes in water regime could potentially affect the designated sites and it is unclear how these changes in water level would impact upon the chosen policies for shoreline management.</p> <p>WMRU1, 2 currently have 'Water Available Status' and WMRU3 currently has 'No Water Available' status.</p> <p>Units WMRU1, 2 will have a long-term 'Water Available' status (2014 and 2020) and WMRU3 will have a long-term 'No Water Available' status (2014 and 2020).</p>	<p>The SEA should ensure that water dependent sites are identified and policy assessment is focussed on the potential impact. Also potential opportunities for enhancement of sites and expansion of sites. Important local features that may affect water availability of WMRU1 includes 12 SSSIs, 3 SACs.</p> <p>Important local features that may affect water availability of WMRU2 includes 8 SSSIs, 2 SACs, and 1 SPA.</p> <p>Important local features that may affect water availability of WMRU3 includes 7 SSSIs, 1</p>	<p>Although coastal situations usually fall outside the CAMS processes, there may be issues of decrease in ground water or surface water recharge for designated sites or impact upon the structural geology of coastal cliffs.</p>

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
		 <p><i>Dinas reservoir</i> (Source: North Ceredigion CAMS, 2006)</p>	SACs, and 1 SPA.	
<p>Conwy Local Development Plan Preferred Strategy 2006</p>	<p>The structure of the Plan reflects the four sustainable development principles that have been adopted by the UK and the Welsh Assembly Government. They are:</p> <ol style="list-style-type: none"> 1. Social progress which recognises the needs of everyone; 2. High and stable levels of economic growth and employment; 3. Prudent use of natural resources; and 4. Effective protection of the environment. 	<p>The West of Wales SMP2 needs to take into consideration the key policies of the LDP including the following:</p> <p>The Plan will:</p> <p>a) Propose 4,730 dwellings during the period from 2005 to 2020; and b) Propose an indicative range of 60 – 90 hectares of employment land.</p> <p>The areas include – Coast (East) Abergele, Llanddulas, Towyn & Kinmel Bay; Coast (Central) Bay of Colwyn, Llysaen, Mochdre; Creuddyn including Conwy, Llandudno; Coast (West) Llanfairfechan, Penmaenmawr; Rural; and All other communities.</p> <p>The Plan will:</p> <p>a) Guide development towards sites that minimise the need to travel and where this is not possible, on sites that are well served by public transport;</p> <p>b) Safeguard land to provide a bypass for Abergele;</p> <p>c) Safeguard existing and proposed recreational routes; and</p> <p>d) Adopt parking standards for all forms of development.</p>	<p>The SEA should incorporate any issues related to the shoreline of Conwy assessed in the SEA undertaken for the LDP. The SEA should also ensure that the key issues associated with the environment addressed in LDP are also reflected in the SEA.</p>	<p>A number of LDP objectives have been formulated as a means of realising the vision in the Community Strategy and addressing various issues including storm damage and coastal defences:</p> <p>Several coastal towns and villages have suffered from storm damage. Coastal defences protect human life and property, as well as road and rail routes. It is therefore essential that improvements to the coastal defences achieve the highest level of protection without harming beach quality, geodiversity, ecology or tourism.</p> <p><i>[For other issues associated with the objectives see the Chapter 1 of the LDP]</i></p>

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
		<p>The Plan will:</p> <p>a) Retain the identity of individual settlements through the use of green barriers;</p> <p>b) Safeguard landscapes, habitats and sites of other features of local importance;</p> <p>c) Protect the character and openness of the countryside and undeveloped coastline from inappropriate development; and</p> <p>d) Protect and enhance both rural and urban natural environment.</p> <p>The Plan will:</p> <p>a) Guide development away from areas at risk of flooding; and</p> <p>b) Support the provision of suitable, economically, technically and environmentally sound and sustainable coastal defence systems.</p>		
<p>Conwy Catchment Abstraction Management Strategy 2004</p>	<p>The vision for the CAMS is a shared strategy for the sustainable management of water resources within Anglesey.</p> <p>This will be achieved by making more information of water resources and licensing practice publicly available and allow the balance between the needs of abstractors, other water users and the aquatic environment to be considered in consultation with the local community and interested parties.</p> <p>There are 3 Water Resource Management Units (WMRUs) associated with Conwy.</p>	<p>Changes in water regime could potentially affect the designated sites and it is unclear how these changes in water level would impact upon the chosen policies for shoreline management.</p> <p>WMRU1 currently has 'Water Available Status' and WMRU2 currently has 'No Water Available' status. WMRU3 has not been assessed.</p>	<p>The SEA should ensure that water dependent sites are identified and policy assessment is focussed on the potential impact. Also potential opportunities for enhancement of sites and expansion of sites.</p>	<p>Although coastal situations usually fall outside the CAMS processes, there may be the issue of decrease in ground water or surface water recharge for designated sites or impact upon the structural geology of coastal cliffs.</p>
<p>Conwy Local Biodiversity Action Plan</p>	<p>The LBAP provides a framework for local biodiversity action that will contribute to the delivery of national targets for key habitats and species, and the raising and awareness and understanding of the relevance of the biodiversity to the people of Conwyn.</p>	<p>It is important that the LBAP is integrated into the work of initiatives that have an influence on biodiversity conservation including SMPs.</p>	<p>No major influences on the SEA as the LBAP and SEA both complement each others objectives regarding the protection of local biodiversity.</p>	<p>- Agriculture & Forestry;</p> <p>- Development;</p> <p>- Transport;</p> <p>- Recreation and Tourism;</p> <p>- Water Management;</p> <p>- Pollution; and</p> <p>- Climate change, for example coastal habitats and their species will be threatened by 'coastal squeeze' as they are trapped between the rising sea and manmade hard defences and urban areas.</p>

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
<p>Gwynedd Unitary Development Plan 2001 - 2016</p>	<p>Planning and sustainable development issues are important considerations in the delivery of all Local Authority services. The basis for the land use strategy put forward in the Unitary Development Plan will be the objectives set out in Gwynedd Council's Corporate Plan:</p> <ul style="list-style-type: none"> - To provide services of the highest quality possible within the available resources in accordance with the people's wishes; - To increase employment opportunities by supporting measures to strengthen the economy and ensuring effective education and training to enable residents to take advantage of the jobs created; - To promote equal opportunities for all, reduce deprivation and poverty and to ensure care and protection for vulnerable and defenceless residents; - To develop safe and sustainable communities in the countryside and towns by supporting community provision and better living circumstances; - To protect and improve the County's natural and built environment and contribute to safeguarding the worldwide environment; and - To safeguard the County's cultural heritage, promoting the use of the Welsh language in the Council's activities and throughout the area as a whole. 	<p>The West of Wales SMP2 needs to take into consideration the key policies of the LDP including the following:</p> <p>SUPPLY OF LAND FOR HOUSING THE COUNCIL WILL ENSURE, THROUGH THE PROCESS OF MONITORING AND REVIEWING THE PLAN, THAT A MINIMUM OF 5 YEARS SUPPLY OF LAND IS ACTUALLY AVAILABLE IN THE PLAN AREA.</p> <p>NEW HOUSES ON UNALLOCATED SITES WITHIN THE DEVELOPMENT BOUNDARIES OF THE SUB-REGIONAL CENTRE AND URBAN CENTRES.</p> <p>In principle, proposals to build houses on suitable unallocated sites within the development boundaries of the Sub-regional Centre (Bangor) and the Urban Centres (Caernarfon, Pwllheli, Porthmadog and Blaenau Ffestiniog) will be approved.</p> <p>PROTECTION OF INTERNATIONAL NATURE CONSERVATION SITES Proposals not directly linked with or necessary in order to manage a site, and which are likely to cause direct or indirect significant harm (either individually or in combination with other plans or projects) to the integrity of Special Protection Areas (potential or classified), Special Areas of Conservation (candidate or designated), RAMSAR sites (proposed or listed) will be refused unless certain criteria can be met (see Policy B14 of the LDP).</p> <p>PROTECTING REGIONALLY IMPORTANT GEOLOGICAL/ GEOMORPHOLOGICAL SITES (RIGS) Proposals that are likely to have a cause significant impact on a Regionally Important Geological/ Geomorphological Site (RIGS) will be refused unless the need for the</p>	<p>The SEA should incorporate any issues related to the shoreline of Gwynedd assessed in the SEA undertaken for the LDP. The SEA should also ensure that the key issues associated with the environment addressed in LDP are also reflected in the SEA.</p>	<p>The key issues for Gwynedd are similar to those of Ceredigion with a greater emphasis on the protection of natural physical features such as the RIGS and the Heritage Coast.</p>

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
		<p>development is more important than the site's value to earth science or the landscape.</p> <p>PROTECTING THE OPEN COASTLINE Outside the Heritage Coast, proposals on open coastal areas included in the Plan area will only be approved if they comply with all the following criteria:</p> <ol style="list-style-type: none"> 1. They require a location on or in close proximity to the coast or open estuaries; 2. There will be no adverse impact on: <ol style="list-style-type: none"> a) Water quality; b) Public access considerations; c) The built environment or the landscape; d) Nature conservation interest of the area due to their location, noise, scale, form, appearance, materials, noise or emissions or due to an unacceptable increase in traffic. 3. Priority will be given to locations that are visually well related to existing buildings or structures; and 4. There are no suitable locations within developed areas of coastline. <p>HERITAGE COAST Within the Heritage Coast, proposals for any building or structure will be refused unless they comply with all the following criteria:</p> <ol style="list-style-type: none"> 1. A coastal location is necessary; 2. There will be no adverse impact on: <ol style="list-style-type: none"> a) The built environment or the landscape. b) The importance of the coastline in scientific, historical or biodiversity terms. c) Natural or physical coastal processes. 3. Priority will be given to locations that are visually well related to existing buildings or structures; and 4. There are no suitable locations outside the Heritage Coast. <p><i>[For additional policy information, see the LDP]</i></p>		

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
<p>Gwynedd Local Biodiversity Action Plan</p>	<p>The LBAP provides a framework for local biodiversity action that will contribute to the delivery of national targets for key habitats and species, and the raising and awareness and understanding of the relevance of the biodiversity to the people of Gwynedd.</p> <p>Key focus:</p> <ul style="list-style-type: none"> - Wet Woodland; - Maritime cliff and slopes; - Water Vole; - Arctic Charr; and - Bluebell. 	<p>It is important that the LBAP is integrated into the work of initiatives that have an influence on biodiversity conservation including SMPs.</p>  <p><i>Pink Sea Thrift and white Sea Campion on sea cliffs at Mynydd Cilan, Lly'n Peninsula, May 2004.</i> (Source: Gwynedd LBAP)</p>	<p>No major influences on the SEA as the LBAP and SEA both complement each others objectives regarding the protection of local biodiversity.</p>	<p>Some wet woodland has disappeared because of felling. Other examples are suffering damage from drainage, from water pollution and from colonisation of invasive plants such as Japanese Knotweed.</p> <p>Much of Gwynedd is surrounded by the sea. The cliffs and slopes so common in parts of the county such as on the Lly'n Peninsula have a wide range of vegetation types. Maritime cliffs and slopes are often under threat from urban and industrial development, inappropriate coastal defences, from holiday accommodation and from changes in agricultural practices. Sometimes the breeding seabirds they nurture are under threat too, from predation by cats and rats.</p> <p>Some cloddiau (characteristic of the Lly'n Peninsula) have been removed to create larger fields. Others are suffering damage. Traditional maintenance skills have been lost. Severe mechanical trimming of vegetation, or cutting it at the wrong time of year, is one of several problems.</p>
<p>Pembrokeshire Local Development Plan Preferred Strategy Consultation Document 2011-2021</p>	<p>The LDP will demonstrate that it is encouraging patterns of development that are economically, socially and environmentally sustainable. Pembrokeshire County Council has already prepared a LDP Sustainability Appraisal/Strategic Environmental Assessment (SA/SEA) Scoping Report (July 2008) as part of this process. This is the first stage of the Sustainability Appraisal process.</p> <p>The Community Plan for Pembrokeshire identifies 5 key priorities which were also adopted in the Objective 1 Local Action Strategy. These 5 priorities were defined in order to help integrate the</p>	<p>The West of Wales SMP2 needs to take into consideration the key policies of the LDP including the following:</p> <ul style="list-style-type: none"> - All proposals must deliver sustainable development. This will require proposals to demonstrate how positive economic, social and environmental impacts will be achieved and adverse impacts minimised, where possible. - An affordable housing target will be set to meet newly arising affordable housing needs and where possible contribute to meeting the backlog of need identified in the Local Housing 	<p>The SEA should incorporate any issues related to the shoreline of Conwy assessed in the SEA undertaken for the LDP. The SEA should also ensure that the key issues associated with the environment addressed in LDP are also reflected in the SEA.</p>	<ul style="list-style-type: none"> - Waste needs to be diverted from disposal to landfill sites to meet environmental objectives and avoid significant fines. - The Council is expected to contribute towards meeting National targets for renewable energy. - Good design can improve the environment and people's health and well being. - Erosion of local distinctiveness. - Climate change and its impact including flooding issues.

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
	<p>Community Plan with other plans and Strategies and provide a framework for the LDP. They are:</p> <p><i>A. Developing vibrant communities;</i> <i>B. Improving communication links to, from and within the County;</i> <i>C. Delivering economic growth based on local need;</i> <i>D. Encouraging people to reach their potential;</i> <i>E. Promoting a clean, healthy and valued; and environment.</i></p> <p>From the above several objectives have been developed for the LDP including:</p> <ul style="list-style-type: none"> - To protect and enhance the landscape and countryside; - To safeguard archaeological, built and natural heritage (including mineral reserves); - To enhance the built environment, ensuring high quality sustainable design and local distinctiveness; - To reduce, and adapt to, the effects of Climate Change; - To protect and enhance biodiversity; and - To develop Brownfield sites in preference to Greenfield sites where appropriate . 	<p>Market Assessment.</p> <ul style="list-style-type: none"> - Proposals for transport routes and improvements that deliver the emerging Regional Transport Plan for South West of Wales will be supported and where appropriate safeguarded. In particular improvements to road and rail links to the Pembrokeshire ports, to port facilities and to the Pembrokeshire towns will be supported. - Tourism Developments which are in sustainable locations, contribute to the diversity of attractions and do not damage the environment or threaten local communities will be supported. - The LDP will identify areas with a high percentage of Welsh speakers where mechanisms to ensure development does not have an adverse impact on communities may be required. - The County's natural and built environment and landscape will be protected from inappropriate development and where possible enhanced by high standards of design. <p>Summary of Policy Options for Strategic Policies:</p> <p>A (Low Growth Option): A total of 3400 houses will be provided over the plan period.</p> <p>B (Medium Growth Option): A total of 4700 houses will be provided over the plan period.</p> <p>C (High Growth Option): A total of 7000 houses will be provided over the plan period.</p> <p><i>[For additional policy information, see the LDP]</i></p>		<ul style="list-style-type: none"> - Pembrokeshire County Council should contribute to meeting local regional and National mineral needs and has to safeguard the County's coal resource. - Urban and rural landscape is key to making Pembrokeshire an attractive place to live and visit. - Loss of, and threats to, certain species and habitats. - Access to adequate recreational open space.

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
Pembrokeshire Local Biodiversity Action Plan 2000	<p>The LBAP provides a framework for local biodiversity action that will contribute to the delivery of national targets for key habitats and species, and the raising and awareness and understanding of the relevance of the biodiversity to the people of Pembrokeshire.</p>	<p>It is important that the LBAP is integrated into the work of initiatives that have an influence on biodiversity conservation including SMPs.</p>	<p>No major influences on the SEA as the LBAP and SEA both complement each others objectives regarding the protection of local biodiversity.</p>	<p>Key factors affecting the habitats of Pembrokeshire:</p> <ul style="list-style-type: none"> - Physical processes (e.g. net erosion); - Recreational pressures and associated development; - Sea defence & stabilisation; - Lack of grazing by rabbits; - Changes in agricultural practices; - Exploitation and other human influences; - Invasive alien species; and - Climate change.
Previous Shoreline Management Plans for West of Wales(SMP1) - Pembrokeshire, Central Cardigan Bay, North Cardigan and Ynys Enlli to Great Orne.	<p>To provide a framework for the development of sustainable coastal defence policies. In accordance with the SMP guidelines issued by DEFRA, the main objectives to be fulfilled through the development of this plan are:</p> <ul style="list-style-type: none"> • To improve the statutory planning process and related coastal zone planning. • To ensure that future policies for coastal defence do not adversely interfere with the behaviour of natural processes within the Plan or across Plan boundaries. • To determine sustainable policies for shoreline management sub-cells based on a thorough evaluation of the processes and interactions affecting the shoreline in accordance with MAFF strategies for flood and coastal defence. • To ensure compatibility with national and local biodiversity targets by protecting and where possible enhancing nature conservation interest and in particular to safeguard the integrity of sites of regional, national or international importance. • To determine, when required, appropriate standards and forms of sustainable coastal defence for existing and/ or new works that are environmentally acceptable, including the maintenance and management of man-made and natural coastal defences. • To promote co-ordinated monitoring of coastal processes and regular shoreline surveys throughout the sub-cell to improve knowledge 	<p>The SMP2 will need to incorporate or build upon the first round SMP taking into account of information collected or changing circumstance.</p>	<p>There are no major influences as the SEA will ensure the environment is taken into consideration in regards to the impacts of the selected shoreline management policies.</p>	<p>Impacts regarding the policy options chosen for the management of coastal process units (CPU) on coastal processes, natural environment and human and built environment.</p>

Plan	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issues
	<p>and understanding of the coastal environment, including identifying gaps in knowledge and proposing future research.</p> <ul style="list-style-type: none"> To develop an improved public awareness of the behaviour of the coast and the influences they and others have on it. 			

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APPENDIX B THEMATIC REVIEW ASSET TABLES

First Review of Shoreline Management Plan for the
Cardigan Bay Coastal Group and the Ynys Enlli to Great Orme Coastal Group
West of Wales SMP2

Features and Objectives



Contents

Introduction and Brief Explanation

- PDZ 1 - St Ann's Headland – St Ann's Head to Borough Head
- PDZ 2 – St Brides Bay – Borough Head to Cwm Bach
- PDZ 3 – South Cardigan Bay – Cwm Bach to Anglas Bay
- PDZ 4 – Fishguard Bay – Anglas Bay to Pen y Bal
- PDZ 5 – Teifi – Pen y Bal to Traeth y Gwyrddon
- PDZ 6 - South Ceredigion – Traeth y Gwyrddon to Carreg Wallog
- PDZ 7 – New Quay Bay – Carreg Wallog to Gilfach yr Halen Holiday Park
- PDZ 8 – Aberaeron Plateau – Gilfach yr Halen to Carreg Ti-pw
- PDZ 9 – Aberystwyth – Carreg Ti-pw to Sarn Gynfelyn
- PDZ 10 – Dyfi – Sarn Gynfelyn to Ton Fanau
- PDZ 11 – Barmouth – Ton Fanau to Traeth Dyffryn
- PDZ 12 – Coastal Snowdonia – Traeth Dyffryn to Pen y Chain
- PDZ 13 – Four Bays – Pen y Chain to Trwyn Cilan
- PDZ 14 – Lley West – Trwyn Cilan to Porth Dinllaen
- PDZ 15 - North Bays – Porth Dinllaen to Trwyn Maen Dylan
- PDZ 16 – Menai – Trwyn Maewn Dylan to Gerzim and Twyn y Parc to Penmon Point
- PDZ 17 – Holy Island and West Anglesey - Twyn Cliperau to Twyn y Parc
- PDZ 18 – North Anglesey – Twyn Cliperau to Trwyn Cwmrwd
- PDZ 19 – East Bays – Trwyn Cwmrwd to Penmon Point
- PDZ 20 – Conwy – Gerizim to Great Orme

Issues Theme Legend

Environmental	Hard Asset
Commercial	Impactor
Heritage	Recreational
	Issues without Objectives



Features, Issues and Objectives.

Introduction

Shoreline Management Policy is developed from an understanding of the issues people raise and identification of specific objectives associated with these issues; in effect attempting to understand why it is we need to be managing the coast. The issues have been identified through analysis of data provided by Key Stakeholders. In addition, issues have been raised by other organisations and members of the public through the initial stages of consultation.

All issues raised have been included in the development of the Features, Issues and Objectives tables, this regardless of whether an issue being raised is strictly one relating to flood and coastal erosion risk management. This allows the Shoreline Management Policy to be developed in a properly integrated manner, being able to take into consideration other perspectives of coastal use. The objectives associated with each feature or coastal issue is developed with specific reference to that issue and, as such, there are objectives relating to each and every issue. During the next step of the SMP2 process all relevant objectives will therefore be taken into account in developing policy. This inclusive approach to identifying and attempting to understand what matters on the coast does, almost inevitably, mean that there will be conflicting ideas as to how the coast in any local area should be managed; it is unlikely, therefore, that all objectives can be met. This does not detract from the importance of identifying as many issues as possible at this stage of the SMP2, and the need to understand what it is about the coast that we are attempting to manage.

The following section provides a brief explanation of the various columns in the tables.

Brief Explanation of the Tables

The following examples have been used to explain how issues are identified and how they are recorded.

Each issue is associated with a feature of the coast; a tangible thing. The significance of the issue is identified and from the issue an objective is derived.

Ref No. Location	Feature	Issues associated with feature	FCD Issue	Affect Policy	Benefits/ Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is there enough of this benefit?	Potential for substitution	Objectives
	<i>Text specifying something tangible that provides a benefit or service to society.</i>	<i>Text describing any issues identified with the feature</i>	<i>Yes/ No response on whether it has direct relevance to flood and coastal defence management</i>	<i>Yes/ No response on whether it may affect the choice of policy</i>	<i>Text defining actual tangible benefits of the feature</i>	<i>Scale of importance</i>	<i>One of six general themes</i>	<i>Text defining who benefits</i>	<i>The demand for this feature</i>	<i>Can the use be moved? Yes/No</i>	<i>Text defining the objective against which the policy will be appraised.</i>
	Example 1 Residential properties	Potential loss of or damage to properties through flooding or erosion	Yes	Yes	Homes for people. Anxiety and stress to owners and occupiers facing loss. Impacts on community cohesion	Local	HA	Sub-regional community. Individual property owners.	No	Yes	Prevent loss or damage due to erosion or flooding.
	Example 2 Commercial interests	Potential loss of business at Crab and Lobster Co resulting from disruption to shellfishery.	No	Yes	Importance to local economy (socio-economic)	Local	C	Local economy	No	No	Prevent damage to fishery.
	Example 3 Amenity Open space	Potential threat to recreation areas from erosion or flooding	Yes	Yes	Important amenity areas for local residents and visitors to the area (socio-economic)	Local	R	Local community and tourists	No	No	Prevent loss due to flooding or erosion.
	Example 4 Bathing Beach	The way in which the coastline is managed may have an adverse effect on the value of the beach	Yes	Yes	The beach is a major asset in attracting tourists and an important recreational feature of the town. (socio-economic)	Regional	R	Regional economy, businesses, residents and community	No	No	Maintain a beach suitable for bathing/recreation.
	Example 5 SSSI (geological)	Way in which the coastline is managed may impact on geological value of beach by erosion or burial	Yes	Yes	Geological value as SSSI, GCRS, RIGS (environmental)	National	E	National community	No	No	Avoid accelerated erosion or deposition.

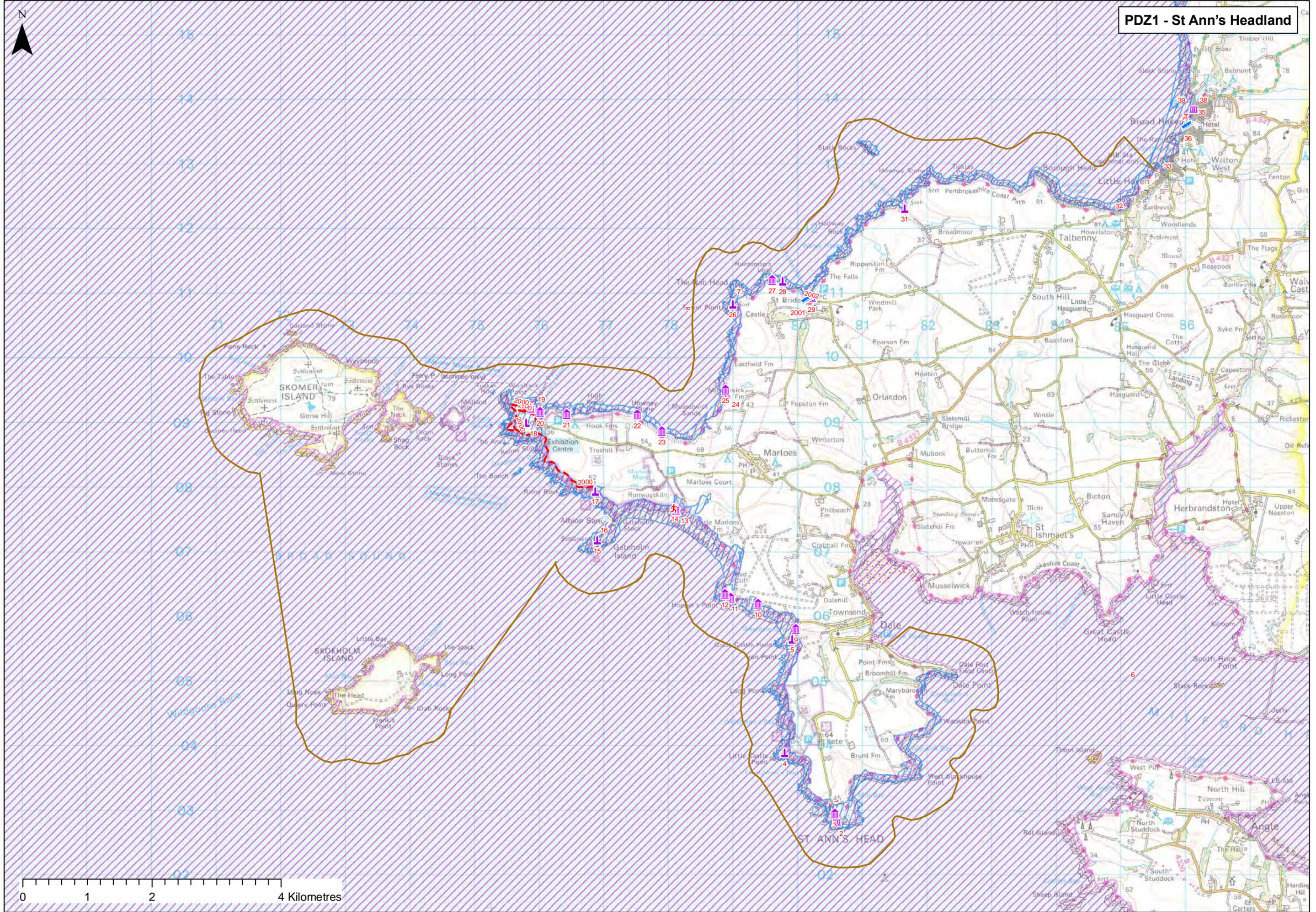
Each Issue is coloured according to its general theme, although it is recognised that certain issues cut across different themes. A key to the colouring is shown on the front sheet. Some issues have been raised where there is no specific objective. These are included as issues that need to be referred to when developing policy.



PDZ1 St Anns Headland - St Anns Head to Borough Head

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
1	F001	St Annes Head	Coastal Road	Coastal Road for access to light house	Road is in close proximity to the cliff, at risk of erosion.	Yes	Yes	Required for access to light house and coastguard cottage (which are listed buildings)	Local	HA	Local Community	No	Yes	Maintain access to lighthouse and coastal path
2	H001	St Annes Head	Listed Building	Telegraph Station	Perched on the tip of St Annes head, may be lost with coastal recession	Yes	Yes	Listed Building	Regional	H	Regional Community	No	No	To prevent disturbance or deterioration to the site and it's setting
3	H002	St Annes Head	Historical	Old Lighthouse and Command post	Perched on the tip of St Annes head, may be lost with coastal recession	Yes	Yes	Historical importance, and now used as a lookout	Local	H	Local Community	No	Yes	To prevent disturbance or deterioration to the site and it's setting
4	H003	Little Castle Point	SAM	Hillfort, SAM	Little Castle Point defended enclosure may lose land with cliff erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
5	H004	Great Castle Head	SAM	Hillfort, SAM	Great castle head rath may lose land with cliff erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
6	F002/E001	Dale and South Marloes Coast	SPA,SAC, SSSI	SPA,SAC, SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest. Rare species, bats in caves, grey seals use caves for pups, otters, nationally rare and scarce lichens, sandy beaches, geologically varied and important cliffs. Important marine areas and sea inlets	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA,SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
7	E002	De Porth Sain Ffred/ St Brides Bay South	SSSI	SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology, vegetation, invertebrates, grey seals)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI site and interest features within the context of a dynamic coastal system
9	H005	Westdale Bay	Historical	Deserted early settlement	Loss due to erosion	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
10	H006	The Hooksies	Historical	Unenclosed settlement	Loss due to erosion	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
11	H007	Hoopers point	Historical	defence post	Loss due to erosion	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
12	H008	Hoopers point	Historical	Firing Range	Loss due to erosion	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
13	H009	Marloes Sands	Historical	Greatmire Mill	Loss due to erosion	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
14	F003	Marloes Sands	Access	Access to beach	Steps need regular maintenance, due to coastal erosion	Yes	Yes	Acess to beach for recreation	Local	R	Local	No	Yes	maintain/relocate access onto the beach
15	H010	Gateholm Island	SAM	Monastery/enclosed settlement SAM	Island may lose some land of 'Hut groups on Gateholm Island' due to erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
16	H011	Albion Sands	Protected Wreck	Wreck	The Albion' first paddle steamer to be brought by bristol channel port. wrecked in 1840ish	Yes	Yes	Protected Wreck	National	H	National Community	No	No	To prevent deterioration or disturbance to historic wrecks.
17	H011a	Watery Bay	SAM	SAM	On top of the cliffs, there may be some loss of Watery Bay Rath with cliff erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
18	H011b	Jack Sound	SAM	Deer Park promontory Fort SAM	Large SAM, may experience erosion in the future	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
19	H012	Haven Point	Historical	Observation post	Loss due to erosion, still in use	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
20	H013	Martins Haven	Historical	Landing point	Loss due to erosion, still in use	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
21	H014	West Hook farm	Historical	Reservoir	Loss due to SLR/coastal recession	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
22	H015	Howney Stone	Historical	Observation post	Loss due to SLR/coastal recession	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
23	H016	Hopgang	Historical	Medieval Quarry	Loss due to SLR/coastal recession	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
24	H017	Musselwick Mouth	Historical	Post Medieval quarry	Loss due to SLR/coastal recession	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
25	H018	Musselwick Mouth	Historical	WW2 air gunnery and bombing range lookout tower, now destroyed	Loss due to SLR/coastal recession	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
2000		Martins Haven	Footpath	Coastal Footpath	At risk of loss due to coastal erosion	Yes	Yes	Pedestrian access	Local	R	Local Community	No	Yes	Maintain use of public right of way

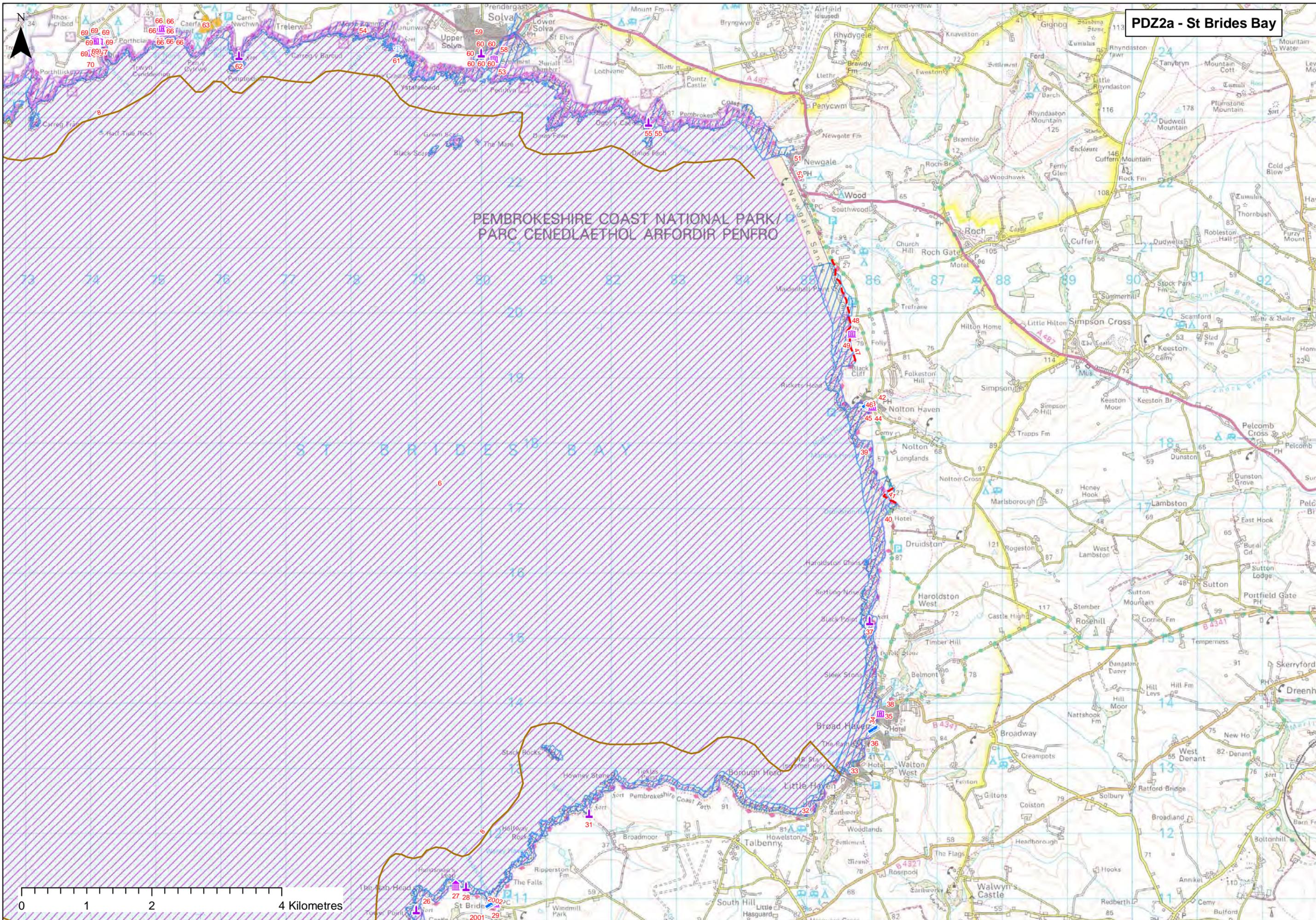
PDZ1 - St Ann's Headland



0 1 2 4 Kilometres

PDZ2 St Brides Bay - Borough Head to Cwm Bach

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
8	E003	Pembrokeshire Coast	Heritage Coast	Heritage Coast	Majority of the Pembs coastline is heritage coast	Yes	Yes	Heritage Coast	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the site and interest features within the context of a dynamic coastal system
26	H018a	Tower Point	SAM	Toweer Point Rath SAM	May experience loss of land due to erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
27	H019	Huntsmans Leap	Historical	WW2 air gunnery and bombing range lookout tower, now destroyed	Loss due to SLR/coastal recession	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
28	H019a	Castle Head	SAM	Castle Head defended enclosure SAM	Situated on the shore, this is likely to be lost to SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
29	H020	St Brides	Listed Building	Small village with many archaeological and historic features, including a church, burial grounds, chapel and tower and listed buildings	Lime Kiln Cadw Listed building	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
30	F004	St Brides Community	SAC, SSSI	SAC and SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (geology, vegetation, invertebrates, grey seals)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
31	H021	Mill Haven	SAM	Small sculpture, Lime Kiln Cadw LB and Mill Haven Rath SAM	Series of modern sculptures along coastal path, made from natural materials	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
32	F005	Howelston	Coastal Road	Coastal Road	Falling cliff seaward of coastal road into Little Haven, caravan park at risk	Yes	Yes	Only main access road to caravan park, cliffs are SSSI and SACs	Local	HA	Local	No	Yes	Maintain access along coastline and the ability to have access to and use of the village and the beach
33	F006	Little Haven	Properties	Residential Properties, Pub and Car Park	Potential loss due to shoreline recession, at risk of tidal flooding and loss due to SLR	Yes	Yes	The village is heavily dependent on tourism, thus a loss of assets would economically impact the village. Main access into village, properties potentially lost due to erosion and SLR	Regional	HA	Regional Community	No	No	Maintain the character of Little Haven and maintain a sustainable community
34	F007	Broad Haven	Coastal Road	Coastal Road	At risk of loss due to erosion	Yes	Yes	Main coastal road connecting Little and Broad haven, very close to edge of cliff, at risk due to erosion of cliff	Regional	HA	Regional Community	No	Yes	Maintain access to broad haven and coastal villages
35	F008	Broad Haven	Properties	Properties	At risk of loss due to erosion and sea level rise	Yes	Yes	The village extends to the beach front, and properties are under threat, Sea defences at present do not dissipate wave energy effectively. Village dependent on tourism	Local	HA	Local Community	No	Yes	To prevent loss of properties due to erosion and flooding
36	F009	Broad Haven	Slipway and Access	Slipway	Loss due to SLR/coastal recession	Yes	Yes	Slipway provides access for recreation, watersports, which in turn is important for tourism	Regional	R	Region	No	Yes	Maintain access to beach for boating/recreation
37	H022	Broad Haven	SAM	Hillfort, Black Point Rath SAM	Located on cliff, has slumped 5m due to landslip	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
38	H022a	Broad Haven	Listed Building	Broad Haven House Cadw LB	LB facing the beach, behind the caostal road, at risk of flooding, like the rest of sea facing properties	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
39	E004	Aberbach-Newgale to Little Haven Coast	SSSI	SSSI	Loss due to SLR/coastal recession and changes to natural coastal processes (e.g. erosion and deposition) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology, vegetation, invertebrates, grey seals)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
40	H023	Drudston Haven	Properties	Properties and Druidston Haven Hotel	Small stone summer house located on hillside, at risk of loss due to cliff erosion	Yes	Yes	Residential Property	Local	HA	Local Community	No	No	Prevent loss of properties due to cliff erosion
41	F010	Druidstone Haven	Footpath	Coastal Footpath	Integrity of footpath access to beach is at risk due to erosion	Yes	Yes	Pembrokeshire coastal footpath important for access and recreation	Regional	R	Regional Community	No	Yes	Maintain the use of the pembrokeshire coastal footpath, as it is vital for tourism and as part of the character of the area
42	H023a	Nolton Haven	Listed Building	Nolton Haven Chapel Cadw LB	On a hillside however may experience some flooding in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
43	F011	Nolton Haven	Properties	Properties	Potential loss of housing due to shoreline recession	Yes	Yes	The land use is predominantly recreational and amenity, although there are houses lying within the hinterland.	Local	HA	Local Community	No	No	To prevent loss of properties to erosion
44	F012	Nolton Haven	Listed Building	Nolton Chapel	Listed building at risk of loss due to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
45	F013	Nolton Haven	Slipway and Access	Slipway	Loss of risk due to SLR, access via slipway may deem a problem for recreational use of beach	Yes	Yes	Notlon relies on recreation and amenity for tourists and residents, A slipway provides access to beach for recreational use	Regional		Regional Community	No	Yes	Maintain access to beach for boating/recreation
46	F014	Nolton Haven	Car Park	Road and Car Park	At risk of erosion, loss due to SLR	Yes	Yes	Access road to town, coastal road, skirts very close to the beach	Regional	HA	Regional Community	No	Yes	Maintain the access to Nolton haven and properties
47	F015	Broad Haven to Newgale	Footpath	Coastal Path	Lies close to cliff edge in places, as risk of loss due to erosion	Yes	Yes	Continual coastal path for Pembrokeshire for recreation	National	R	Regional Community	No	Yes	Maintain the use of the pembrokeshire coastal footpath, as it is vital for tourism and as part of the character of the area
48	F016	Newgale	Properties	Cottages situated on a cliff to the south of the beach	Potentially threatened by erosion of cliff	Yes	Yes	Residential Properties, Listed building	Local	HA	Local Community	No	No	Prevent loss of properties due to cliff erosion
49	H024	Newgale Sands	Listed Building	Coillery remains, Lime Kiln Cadw LB	Listed building at risk of loss due to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
50	F017	Noton Haven to Newgale	SSSI	SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
51	F018	Newgale Sands	Properties	Residential and commercial properties and caravan parks	Human development has hindered the natural evolution of the natural shingle storm beach	Yes	Yes	Long broad sandy bay which is very popular for tourists. Development has damaged the natural storm defences of a shingle ridge. Properties experience flooding and are at risk due to coastal recession and SLR	Regional	HA	Regional Community	No	No	Prevent damage to/ loss of residential and commercial properties due to coastal erosion
52	F019	Newgale Sands	Coastal Road	Coastal road and car park	Road very much at risk of being lost as a result of erosion	Yes	Yes	Infrastructure and amenities are most threatened towards the north of the unit where the shingle embankment encroaches close to the main road and built assets.	Regional	HA	Regional Community	No	Yes	Maintain the ability to have access to and use of the village and the beach

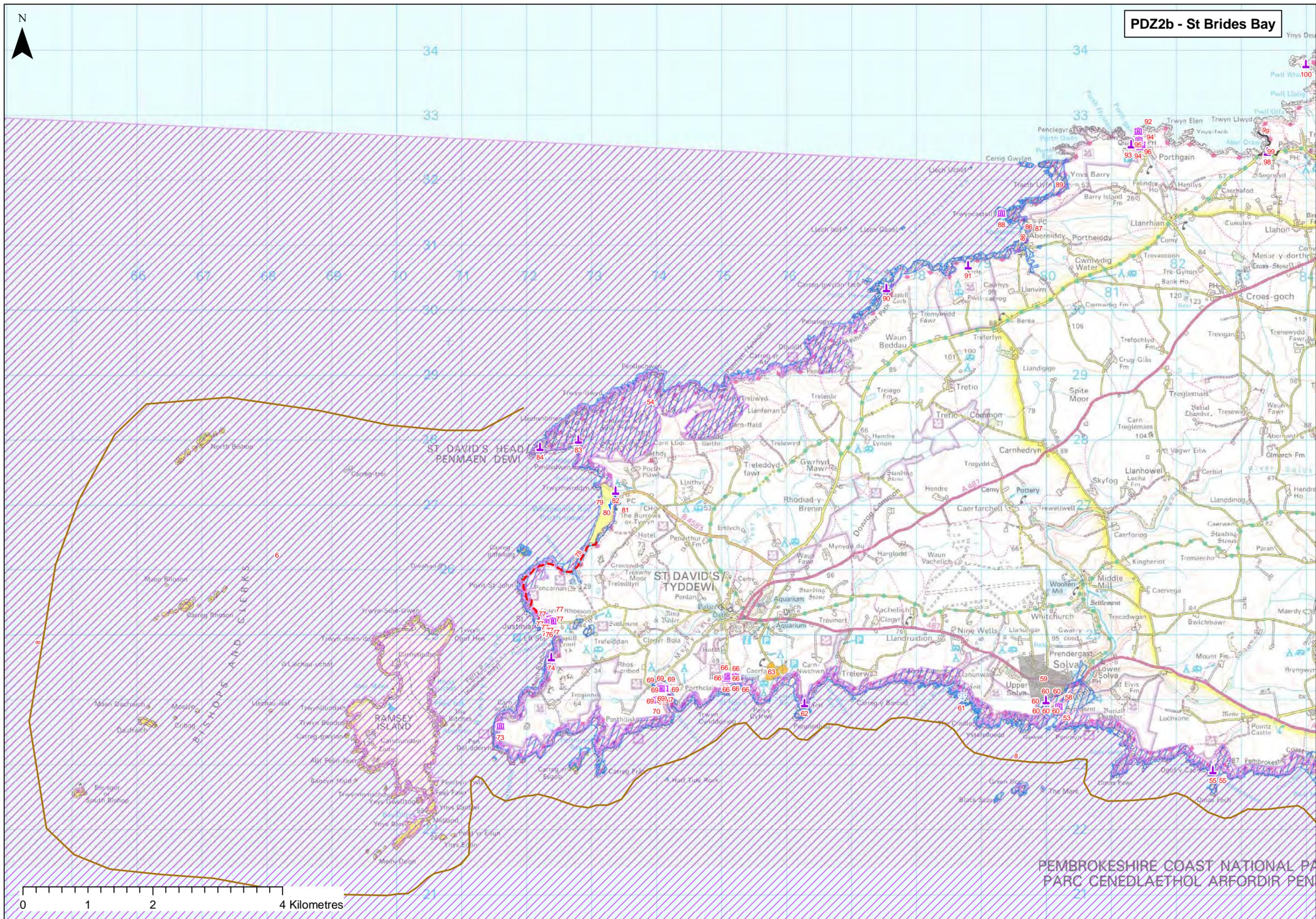


PDZ2 St Brides Bay - Borough Head to Cwm Bach

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is there enough of this benefit	Potential for substitution	Objectives
53	F020	Newgale Sands	SSSI	SSSI	Important environmental areas of interest at risk of loss due to recession. Changes to natural coastal processes (e.g. erosion and deposition) essential for the integrity of the interest features	Yes	Yes	Environmentally sensitive wide sandy foreshore one of most important in Pembrokeshire. Two areas identified as submerged forests at north end of beach. National Nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
54	F021/E005	Newgale to Solva	SPA,SAC, SSSI	SSSI (St Davids Peninsular) and SPA (Ramsay and St Davids Peninsular Coast) and SAC (St Davids and Pembrokeshire Marine SAC)	Loss of habitats and potential loss of designated relict landforms due to recession and/or changes to natural coastal processes (e.g. erosion and deposition) essential for the integrity of the interest features	Yes	Yes	Majority of land owned by National trust, International and national nature conservation interest - Geologically varied coastline and seabed topography in combination with the extreme range of exposure to wave and tidal energy give rise to exceptionally h	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA,SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
2001	F004a	St Brides	Slipway and Access	Slipway	Loss if Sea levels Rise and prevent access for boats	Yes	Yes	Important for access for boats. Popular diving spot for Skokholm island, especially when Little Haven car park is full	Local	R	Local Community	No	Yes	To maintain boating and recreation access
2002	F004b	St Brides	Beach	Small Sea wall	Masonry wall is causing reflection of waves during high tides and rough conditions, increasing the problem of flooding and overtopping	Yes	Yes	Creating further issues	Local	I	Local Community	No	Yes	To maintain the safe use of bay

PDZ2b St Brides Bay - Borough Head to Cwm Bach

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
55	H024a	Dinas Fach	SAM	Dinas Fach Defended enclosure SAM	SAM at risk due to erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
56	F022	Solva	SAC, SSSI	SAC, SSSI	Loss of bird habitats and potential loss of designated relict landforms due to recession and/or changes to natural coastal processes (e.g. erosion and deposition) essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest- numerous rare species, exceptional sea cliff vegetation. National nature conservation interest (including those associated with geology and ecology/habitat)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
57	H025	Solva	SAM	War memorial, settlement SAM	Many historical features including listed war memorial, cottages and chapel SAMs(Promontory Fort and Lime Kilns and Cadw LBs (lime kilns, gwryd house, the old printing house, bridge)	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
58	F023	Solva	Listed Building	Lime kiln and listed buildings	Lime kiln very close to shore in inlet, potential of loss due to SLR, Iron Age hill fort (Griben), lime kilns, quarries, a well, life boat station and quay	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
59	F024	Solva	Properties	Residential and commercial Properties and Pubs	Although heavily defended, at risk of loss to SLR and flooding (Boscastle type flooding risk). (The EA have created a reservoir upstream to prevent such an incident.)	Yes	Yes	Maintain character of town, Solva harbour is a popular boating area	Regional	HA	Regional Community	No	No	Maintain character of Solva, prevent loss of or damage to properties due to flooding
60	H025a	Segar Rock	SAM	Porth y Rhaw camp SAM	May be lost with cliff erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
61	H026	Aber Llong	Protected Wreck	Wreck	Two of three tug boat wrecks, parts of the wreckage remains	Yes	Yes	Protected Wreck	National	H	National Community	No	No	To prevent deterioration or disturbance to historic wrecks.
62	H026a	Pempleidian	SAM	Caerfai Camp SAM	On top of cliffs may be lost with cliff erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
62	F025	Caifai Bay	Access	Access to beach	Possible risk of loss of access path down to beach due to recession	Yes	Yes	Acess to beach for recreation	Local	HA/R	Local	No	Yes	Maintain the ability to have acces to and use of the beach
63	F026	Caifai Bay	Caravan/Holiday Park/Camp Site	Caravan Park	About 100m from cliff edge, potentially threatened by erosion	Yes	Yes	Important feature for holidaymakers	Local	R	Local Community	No	Yes	Maintain the caravan and camping facilities of the area
64	F027	Solva to Porth Clais	cSAC, SSSI	cSAC, SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (including geology)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
65	F028	Penpleidiau	Coastal Road	Iron Age fort and neolithic finds	Located on an island, however at risk of loss due to SLR	Yes	Yes	Archaeological significance	National	H	National Community	No	No	maintain heritage value
66	H027	St Nons	Listed Building	Many listed religious buildings	Risk of loss with coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
67	F029	Porthclais Harbour	Slipway and Access	Slipway and access road	Located in an inlet, potential loss due to SLR	Yes	Yes	Harbour used for recreation, access to water important	Local	HA	Local	No	Yes	Maintain the ability to have acces to and use of the village and the beach
68	F030	Porth Clais Harbour	SSSI	SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geological, botanical, ornithological and zoological interests)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
69	F031	Porthclais Harbour	Listed Building	Limekilns, quarry, inner quay, footbridge, post-medieval, buildings	Located in a small inlet, potential loss due to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
70	H027a	Penporthclais	Listed Building	Grade 2 Cadw LB	On the edge of the estuary of River Alun, may experience problems with coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
71	F032	Porth Clais Harbour	SSSI	SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology, botany, ornithology and zoology interests)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
72	F033	Porth Clais to Ynys Bery (Ramsey)	cSAC, SSSI	cSAC, SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the site and interest features within the context of a dynamic coastal system
73	H028	Penmaen Melyn	Listed Building	small disused copper mine, remains perched on the edge of the cliff, is being eroded	Risk of loss with coastal erosion	Yes	Yes	Archaeological significance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
74	H028a	Castell Heinif	SAM	Castell Heinif SAM promontory fort	Risk of loss with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
75	F034	Ramsey Island	cSAC, SSSI	cSAC, SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest - Geologically varied coastline and seabed topography in combination with the extreme range of exposure to wave and tidal energy give rise to exceptionally high quality and biologically diverse examp	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
76	F035	St Justinians	Lifeboat/ Lifeguard Station	Lifeboat Station	At risk of loss due to SLR	Yes	Yes	Important for rescue purposes	Regional	HA	Regional	No	Yes	Maintain use of lifeboat station
77	H029	St Justinians	Listed Building	Many listed religious buildings	Risk of loss with coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
78	F036	Porthmawr	Footpath	Footpath to beach	Appears to be subject to coastal erosion	Yes	Yes	Required for access to Small beach for recreation	Local	R	Local	No	Yes	maintain the use of footpath for access to beach
79	H030	Whitesands Bay	Heritage Coast	Submerged forest	Risk of loss with coastal erosion	Yes	Yes	Archaeological significance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
80	F037	Whitesands bay	Beach	Beach and coastal path and car park	Possible risk of loss due to shoreline recession	Yes	Yes	Popular beach for tourists and recreation	Regional	HA/R	Regional	No	No	maintain the use of the popular beach of Whitesands Bay
81	F038	Whitesands bay	Lifeboat/ Lifeguard Station	Lifeguard Station	Close proximity to beach, ar risk of loss due to recession	Yes	Yes	Important for rescue purposes	Local	HA	Local	No	Yes	Maintain use of lifeguard station
82	H030a	Whitesands Bay	SAM	St Patricks Chapel SAM	Risk of loss with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
83	H030b	Porthmelgan	SAM	Hut circles and Ancient Enclosures NW of Carn Ildi	Risk of loss with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
84	H030c	St Davids Head	SAM	St Davids Head Camp SAM	Risk of loss with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting

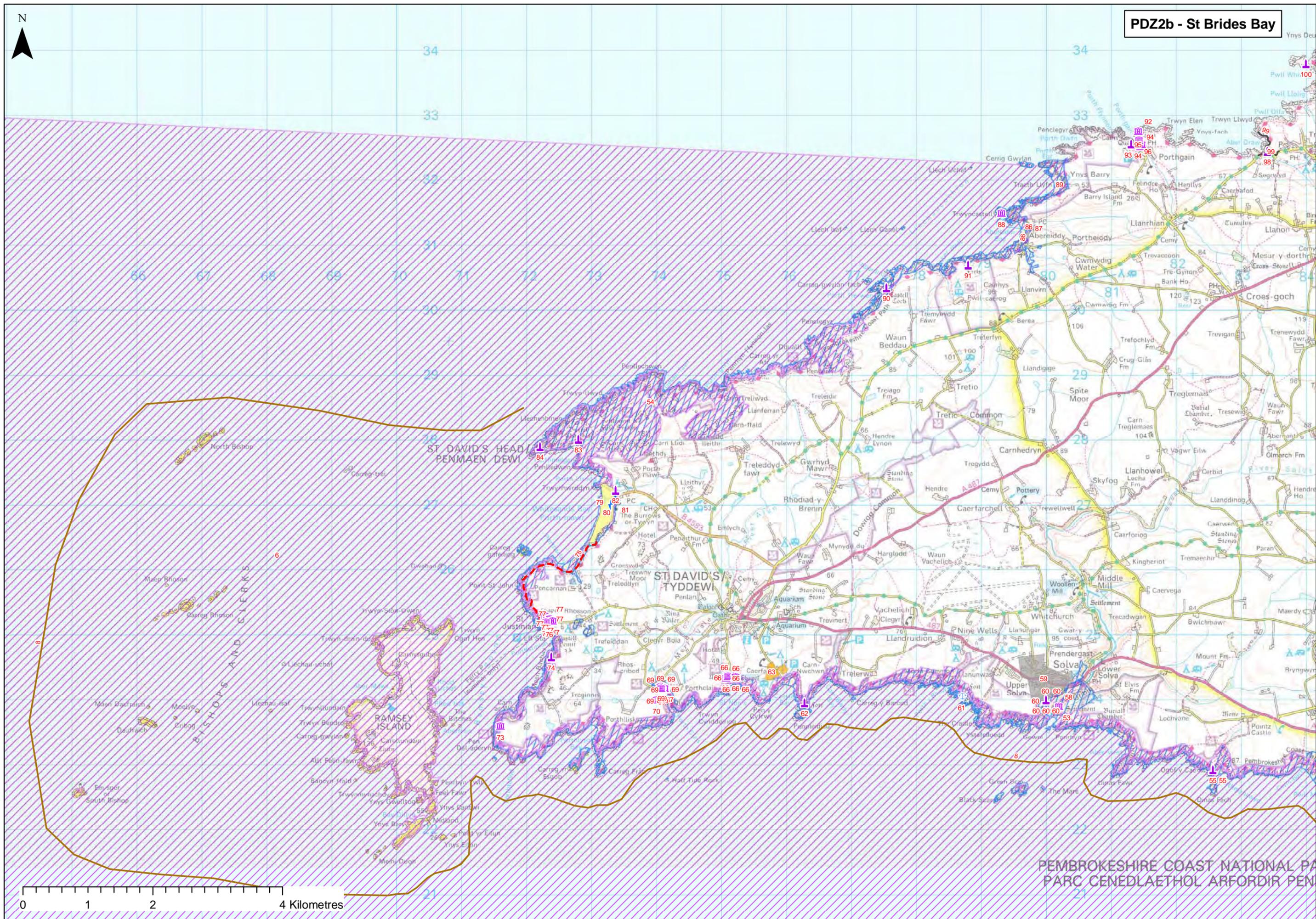


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PEMBROKESHIRE COAST NATIONAL PARK
PARC CENEDLAETHOL ARFORDIR PEN

PDZ2b St Brides Bay - Borough Head to Cwm Bach

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is there enough of this benefit	Potential for substitution	Objectives
85	F039	Whitesands bay	SAC, SSSI	SAC, SSSI	Risk of loss with coastal erosion	Yes	Yes	International and national nature conservation interest - Geologically varied coastline and seabed topography in combination with the extreme range of exposure to wave and tidal energy give rise to exceptionally high quality and biologically diverse examples of a wide range	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
89	E006	Abereiddi	SSSI	SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest - Geologically varied coastline and seabed topography in combination with the extreme range of exposure to wave and tidal energy give rise to exceptionally high quality and biologically diverse examples of a wide range	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
90	H030d	Castell Coch	SAM	Castell Coch Promontory fort SAM	situated close to the shore, may experience loss with SLR and erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and its setting



0 1 2 4 Kilometres

PEMBROKESHIRE COAST NATIONAL PARK
PARC CENEDLAETHOL ARFORDIR PEN

PDZ3 South Cardigan Bay - Cwm Bach to Anglas Bay

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
86	F040	Abereddy Bay	Coastal Road	Coastal Road and car park	Very close to cliff edge, very much at risk of eroding. At risk of losing car park due to coastal recession	Yes	Yes	Required for access to the car park, Abereddy bay used for coastal path and recreation	Regional	HA	Regional	No	Yes	Maintain access to beach for boating/recreation
87	F041	Abereddy Bay	Properties	Properties	Properties are situated further inland in Abereddy Bay. Currently experience tidal flooding issues. Defence works being carried out.	Yes	Yes	Properties, some of which are listed buildings	Local	HA	Local	No	No	To prevent loss of properties due to erosion and flooding and maintain sustainable community
88	H030f	Abereddy Tower	Listed Building	Tower, Cadw Listed Building	On headland may experience issues with coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
91	H030e	Caerau	SAM	Caerau Promontory Forts	situated close to the shore, may experience loss with SLR and erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
92	H031	Porthgain	Listed Building	Navigation aid	grade 2 listed	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
93	H031a	Porthgain	SAM	Porthgain quarry SAM	to the east of porthgain village, may experience erosion issues	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
94	H031b	Porthgain	Listed Building	Cadw Listed Buildings (Ty Mawr and Limekin adjacent to Kinhouse)	Porthgain may experience flooding issues with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
95	F042	Porthgain	Properties	Properties and harbour	At risk of being lost to SLR, properties close to cliff likely to be lost due to erosion	Yes	Yes	Character of Porthgain, used for fishing and recreation	Local	HA	Local	No	No	Prevent the loss of residential properties to erosion and loss of harbour due to SLR
96	F043	Porthgain	Listed Building	Heritage site, Listed buildings	May suffer problems in the future due to SLR	Yes	Yes	Harbour, brickworks, quarry hoppers, tramway, old buildings, cottages, are of archaeological importance	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
97	H032	Abermawr	Heritage Coast	submerged forest	Risk of loss with coastal erosion	Yes	Yes	Archaeological significance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
98	H032a	Abermawr	SAM	Aberfelin Mill SAM	may experience some loss of land with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
99	F044	Aberdraw	Properties	Footpath, Road and Residential Properties	Aberdraw Bay has little development, with only a footpath, road and isolated properties. However, the cliff is eroding, and the path and eventually road are under threat. A few dwellings are at risk due to coastal erosion	Yes	Yes	Important for residents and also for access to the beach for the vilage of Trefin	Regional	H	Regional	No	No	Maintain character of Aberdraw and prevent loss of properties and access to Aberdraw
100	H032b	Pen Castell Coch	SAM	Promontory Fort SAM	On headland, may experience loss of land due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
101	H032c	Ynys y Castell	SAM	Ynys y Castell SAM hillfort	On headland, may experience loss of land due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
102	H032d	Abercastle	Listed Building	3 Cadw listed buildings (Lime kiln, Abercastle mill and phone box)	May experience flooding with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
103	F045	Abercastle	Slipway and Access	Slipway and access road	Located in a small inlet are at risk due to coastal recession and SLR	Yes	Yes	Access to beach, used for recreation	Local	R	Local Community	No	No	Maintain access to beach for boating/recreation
104	F046	Abercastle	Properties	Residential Properties	Properties close to coast are at risk of being lost to SLR	Yes	Yes	Chatacter of Abercastle, dwellings	Local	HA	Local Community	No	No	Prevent the loss of residential property to SLR
105	H032e	Porth Mawr	SAM	Castell Coch Promontory Fort (on Penmorfa) SAM	on headland, may experience loss of land due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
106	H032f	Carreg Golchfa	SAM	Defended Enclosure SAM	on headland, may experience loss of land due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
107	F047	Abermawr	Footpath	Coastal path and pedestrian access	Cliffs are eroding, threatening the pedestrian access to the beach and the coastal path	Yes	Yes	Access to beach, used for recreation	Local	R	Local Community	No	Yes	maintain the use of the pembrookshire coastal footpath, as it is vital for tourism and as part of the character of the area
108	F048/E007	Abermawr	GCR	GCR and SSSI area	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the GCR / SSSI and interest features within the context of a dynamic coastal system
110	H033a	Dinas Mawr	SAM	Dinas Mawr Camp SAM	Situated on a headland, may experience loss of land due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
111	H034	Pen Caer	Listed Building	Military buildings	a few abandoned buildings still in good condition, resting on edge of cliff	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
115	F049	Abermawr	Listed Building	Submarine Listening station	May experience loss due to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
116	F050	Aberbach	SSSI	SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
118	F052/E008	Strumble Head Llechdafad Cliffs	SAC, SSSI	SAC, SSSI	Loss of bird habitats and changes to natural coastal processes (e.g. erosion and deposition) essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (ecology/habitat and geology)	International and National	E	International and National Community		YES	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system



0 1 2 4 Kilometres

PDZ4 Fishguard Bay - Anglas Bay to Pen y Bal

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
109	H033	Pwll Deri	SAM	Monument	Inscribed monument located on edge of cliffs	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
112	H035	Strumble head	Listed Building	Lighthouse and listed cottages Cadw LBs	Situated on a headland, may experience loss of land due to coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
113	H036	Pen Caer	Listed Building	Chapel	Situated on a headland, may experience loss of land due to coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
114	H037	Aber Felin	Listed Building	Commemorative Monument	Erected in 1897, to commemorate the French Landing at carreg, located on cliff edge	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
117	F051	Pwll Deri	Coastal Road	Coastal Road	Road is located 50m from cliff edge in some places, at risk of erosion in the future	Yes	Yes	Main through road	Local	HA	Local	No	Yes	Maintain access
119	F053	Fishguard	Harbour / Marina	Harbour	Important harbour, although heavily defended, at risk of being threatened by SLR	Yes	Yes	Coastline heavily developed as a port and for industry. Important site to defend, It is important for transport and industry, Need to maintain depth and prevent sediment accumulation to allow harbour to be navigable.	National	C	National Community	No	No	Maintain use of harbour
120	F054	Fishguard	Railway	Road and Rail	Infrastrucure important to defend, road and rail line	Yes	Yes	Access and transport to important harbour	National	C	National Community	No	Yes	Maintain access to harbour
121	F055	Goodwick	Properties	Goodwick Town- Properties	Heavily built up town, many properties at risk due to SLR	Yes	Yes	Dwellings, character of town, function of town	Regional	HA	Regional Community	No	No	Prevent the loss of residential property to erosion
122	F056	Goodwick	Hotel	Fishguard Bay Hotel	Listed Building, built close to coast, at risk of erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
123	H033b	Goodwick	Listed Building	Bridge Cottages Cadw listed buildings	locate on the seawrd side of the road, amy experience issues with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
124	F058	Penyraber, Fishguard	Properties	Residential Properties	At risk of loss due to coastal recession in the long term	Yes	Yes	Likely to be lost to shoreline recession, quite a large village	Local	HA	Local Community	No	No	Prevent the loss of residential property to erosion
125	F059	Penyraber, Fishguard	Coastal Road	Coastal Road	Risk of loss due to coastal recession	Yes	Yes	Close to edge of cliff, access into and out of harbour important	Regional	HA	Regional Community	No	Yes	Maintain access
126	F060/E009	Fishguard Cliffs	SSSI	SSSI	Loss due to SLR/coastal recession and changes to natural coastal processes (e.g. erosion and deposition) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI interest features within the context of a dynamic coastal system
127	F061	Lower town Fishguard	Properties	Residential property	At risk of tidal flooding, which will increase with SLR	Yes	Yes	It is a developed valley mouth situated between two cliffed lengths. Lower Fishguard is a typical traditional fishing village with a cluster of houses adjacent to the waterfront and harbour. Many listed buildings in area	Regional	HA	Regional Community	No	No	Prevent the loss of residential property to erosion maintain chracter of Lower Town Fishguard
128	F062	Lower town Fishguard	Coastal Road	Coastal Road	Potential for loss to SLR	Yes	Yes	Lowertown fishguard is fairly built up, main through road for coast and harbour	Regional	HA	Regional	No	Yes	Maintain access
129	F063	Lower town Fishguard	Listed Building	Old Fort	At risk of loss due to coastal recession	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
130	H033c	Lower Town Fishguard	Listed Building	many Cadw listed buildings	along the coast, likely to be lost with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
131	H033d	Castle Point	SAM	Old Fort SAM	on headland, may experience loss of land due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
132	F064	Penrhyn	Caravan/Holiday Park/Camp Site	Caravan Park	Situated on the very edge of a headland, likely to be lost to erosion	Yes	Yes	Holidaymakers and residential importance	Regional	R	Regional	No	Yes	Maintain the function of a caravan park for holidaymakers
133	F065	Pwllgwaelod	Car Park	Car Park, slipway, road	All very close to shoreline, at risk of loss due to erosion and SLR	Yes	Yes	Residential properties, character of bay	Local	HA	Local	No	No	Maintain access to beach for boating/recreation
134	H038	Cwm yr Eglwys	Listed Building	St brynach church Cadw Listed Buildings	situated just behind the beach, likely to be lost with coastal erosion/SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
135	F067	Cwm-yr-Eglwys	SAM	Scheduled ancient monument, Church	Remains of church, village is at risk of flooding	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
136	F068	Cwm-yr-Eglwys	Properties	Residential property	Located on low ground, close to the bay,potential loss to SLR	Yes	Yes	Peoples homes/ important for the character of Cwm yr Eglwys	Local	HA	Local	No	No	Prevent the loss of residential property to erosion, maintain character of Cwm yr Eglwys
137	F069	Aberforest Beach	Footpath	Coastal Path	Small wooden footbridge at risk	Yes	No	Forms parth of coastal path, access to beach	Regional	R	Regional Community	No	Yes	Maintain the use of the pembrokehire coastal footpath, as it is vital for tourism and as part of the character of the area
138	F070	Newport, Parrog	Slipway and Access	Slipway located seaward of TyCanol Farm	Dissused lifeboat station infront of sewage works, small slipway, not used very much	Yes	No	Used for access to the sea	Local	R	Local Community	No	Yes	Maintain access to beach for boating/recreation
139	F071	Newport, Parrog	Properties	Residential Properties	This area is a small, heavily developed strip of coastline. There are a number of seafront properties, which are defended by various hard defence structures. However, these properties are still at risk. Land use is predominantly residential.	Yes	Yes	Very popular tourist village,many residential properties, b and bs and camp sites	Regional	HA	Regional Community	No	No	prevent the loss of residential property to erosion
140	F072	Newport, Parrog	Slipway and Access	Yacht Club and Slipway	Experiences flooding occasionally, at risk due to SLR and coastal recession	Yes	Yes	Access to the Estuary, lots of boating and recreation occurs here. Also access to Newport Sands at low tide for residents, wading across.	Regional	R	Regional Community	No	No	Maintain access to and use of beach and yacht club for boating/recreation
141	H038a	Newport, Parrog	Listed Building	Cadw Listed Buildings (Ty Mawr and Limekiln adjacent to Kilnhouse)	On Nyfer estuary likely to have flooding problems with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
142	H038b	Afon Nyfer	SAM	The old castle SAM	On estuary edge, may be lost to SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
144	F074	Afon Nyfer	Properties	Redidential Properties	Houses located close to estuary, at risk of flooding	Yes	Yes	Private properties	Local	HA	Local	No	No	Prevent the loss of residential property to erosion/SLR

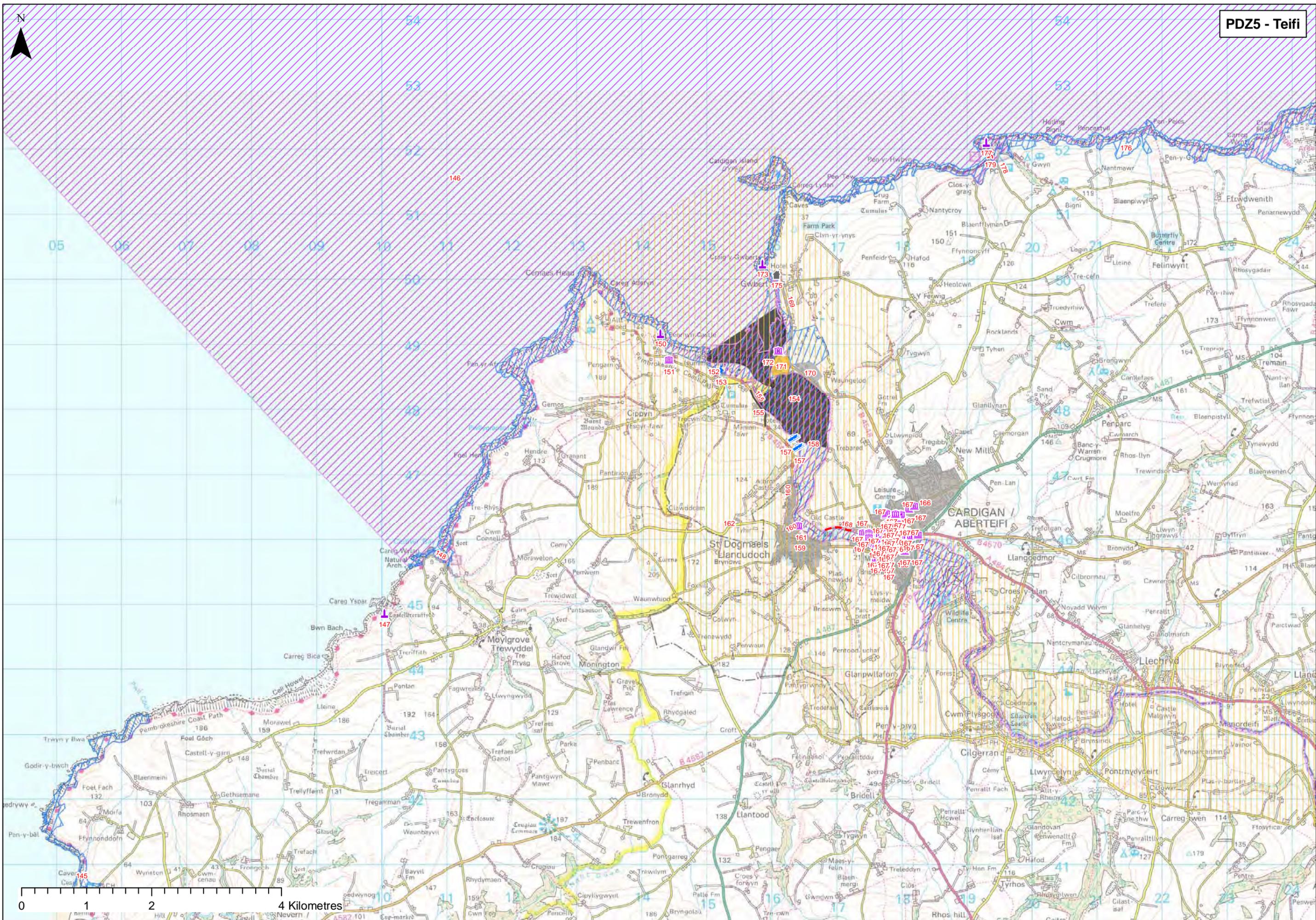


VEHICLE FERRY FROM FISHGUARD TO Rosslare 3 1/2 hours
CATAMARAN FROM FISHGUARD TO Rosslare (V) 1 1/2 hours

0 1 2 4 Kilometres

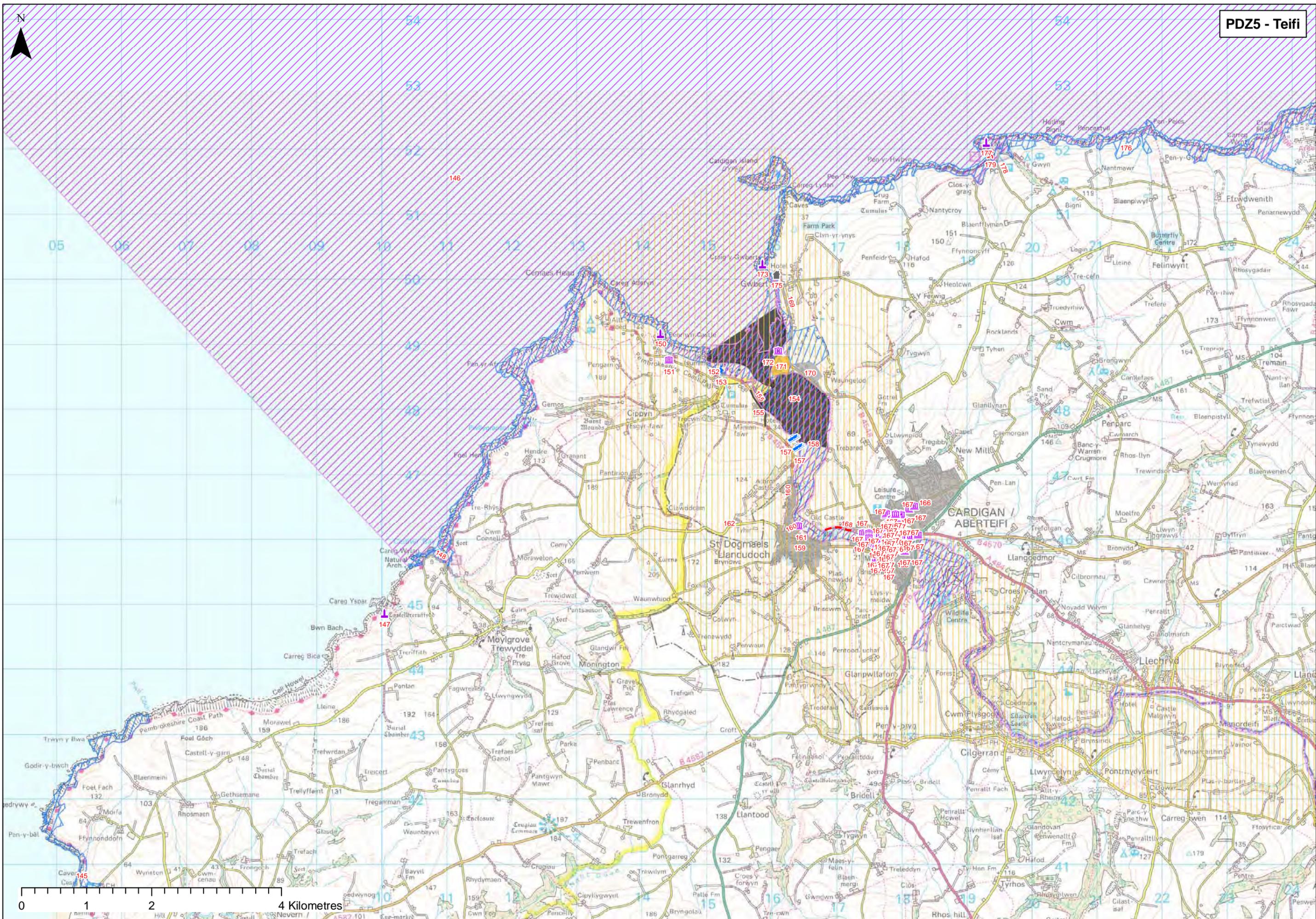
PDZ5 Teifi - Pen y Bal to Traeth y Gwyrddon

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
143	F073	Newport Sands	Car Park	Car Park and Golf course	Beach is eroding, car park is at risk and may be lost to SLR	Yes	Yes	Provides access to very popular beach for recreation	Regional	R	Regional Community	No	Yes	Maintain function of car park for visitors/residents
145	F075/E010	Newport Sands	SSSI	Cliffs SSSI	Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
146	F076/E011	Ceibwr Bay/Aberarth	SAC, SSSI	SAC, SSSI	Environmentally sensitive, potential loss of habitats seal pupping areas. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
147	H038c	Castell Tre-Riffith	SAM	Promontory Fort SAM	Located on a rocky outcrop	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting. <u>record and understand before loss occurs.</u>
148	F077	Ceibwr Bay	Coastal Road	Coastal Road	Access road to bay skirts very close to cliff edge in places	Yes	Yes	Coastal road	Regional	HA	Regional Community	No	Yes	Maintain access
149	F078/E011	Cenmaes Head	SSSI	SSSI	Risk of loss of habitat due to coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
150	F079	Pwll Melyn	SAM	Scheduled ancient monument, Church	Listed building 50 from cliff edge	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
151	H040	Poppit Sands	Listed Building	Rocket apparatus store	Built c.1900 as a store for coastguard life saving apparatus.	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
152	F080	Poppit Sands	Car Park	Car Park	Within dune system, close to shore, at risk of erosion as the dunes roll back	Yes	Yes	Popular recreational beach, requires access	National	HA	National Community	No	Yes	Maintain use of car park for recreational use of beach
153	F080a	Poppit Sands	Lifeboat/ Lifeguard Station	RNLI Station	Located behind poppit sands, requires permanent access to the beach and estuary, location may deem a problem if estuary mouth migrates	Yes	Yes	Important for rescue purposes	National	HA	National Community	No	yes	Prevent loss of lifeboat station
154	F080b	Poppit Sands	Issue without Objective	River channel, poppit dunes	The sands are a mobile feature with potential for erosion of the dunes and material movement into the estuary. Periodic erosion and accretion dependant on storm activity. Concern over accretion causing difficulty of navigation up the river.	Yes	Yes	Important for navigation and for properties along the frontage of the spit.						
155	F081	Afon Teifi	Properties	Residential Properties	Very close to edge of a very dynamic estuary	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent the loss of residential property to erosion/SLR
156	F082	Afon Teifi	Coastal Road	Coastal Road	Although protected by mudflats, in close proximity and on low lying land, could be an issue with sea level rise	Yes	Yes	Access to dwellings, hotels, coastal road into Cardigan	Regional	HA	Regional Community	No	Yes	Maintain access
157	F083	Afon Teifi	Slipway and Access	Slipways and access to estuary	Slipways and landing stages located in estuary on mudflats, at risk of being lost to SLR	Yes	Yes	Access for houses into estuary, area used for boating, recreation	Local	R	Local Community	No	Yes	Maintain access to estuary for boating/recreation
158	E012	Afon Teifi	SAC and SSSI	SAC and SSSI	At risk of loss due to sea level rise. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (ecology/habitat and geology)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
159	F084	St Dogmaels	Properties	Residential property	Properties located very close to the estuary, within the dunes	Yes	Yes	St Dogmaels is fairly popular place to visit, also quite a large settlement	Regional	HA	Regional Community	No	No	Prevent the loss of residential property to erosion/SLR
160	F085	St Dogmaels	Coastal Road	Road	Although this area is vegetated and currently stable, may experience flooding/ loss due to SLR in the future	Yes	Yes	Coastal road to Cardigan	Regional	HA	Regional Community	No	No	Maintain access
161	H038d	St Dogmaels	Listed Building	Cadw listed buildings	At risk of loss due to erosion/SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting.
162	F086	St Dogmaels	Heritage Coast	Special Landscape Area	The stretch from Poppit sands to cardigan is a Special Landscape area, containing buildings of Archaeological importance from the Iron Age, including remains of an abbey	Yes	Yes	Tourism and maintaining character of area	National	H	National Community	No	No	To prevent disturbance to or reduction of the area of the interest features, and ensure policy to enable adaptive response to sea level rise and erosion.
163	F087	Cardigan	Properties	Properties to the South of the river	Both residences and industrial estate are located close to the river, likely to experience flooding in the future	Yes	Yes	Important for Cardigan, large town	Regional	HA	Regional Community	No	No	prevent the loss of residential property to erosion/SLR, maintain the large town of Cardigan
164	Note	General Note	Issue without Objective	Navigation channels	Recognition of possible impacts of coastline management on local navigation, in approaches to harbours and the provision and maintenance of local aids to navigation- existing provision may be affected by coastal management									
165	Note	General Note	SSSI	North West and North Wales Sea Fisheries Committee	Intertidal shellfish beds could potentially be affected by the risk of coastal flooding and or erosion	Yes	Yes	Local Fisherman	National	C	National Community	No	No	Maintain shellfish beds
166	F088	Cardigan	Properties	Properties to the North of the Teifi River	Properties which located close to the river are likely to experience flooding in the future	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent the loss of property to SLR
167	Ho38e	Cardigan	Listed Building	Many listed buildings and SAM	At risk of loss due to SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
168	F089	Cardigan	Footpath	Footpath	Proposed footpath to be placed to the north east of the estuary in Cardigan, may need to ensure this path is far enough inland to avoid problems	Yes	No	Pedestrian access	Local	R	Local Community	No	Yes	Maintain use of public right of way
169	F090	Afon Teifi	Coastal Road	Coastal Road	Road located very close to river.	Yes	Yes	Managing Pen Yr Egdry spit is heavily important for the future behaviour of this estuary and consequently the residences and properties within it. The coastal road must also be considered for access.	Regional	HA	Region	No	Yes	Maintain access
170	F090a	Afon Teifi	Properties	Properties	Properties located close to river at risk of flooding with SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	To prevent loss of properties due to flooding
171	F091	Gwbert	Caravan/Holiday Park/Camp Site	Caravan Park	Located on edge of spit, which plays a huge role in the sediment dynamics of the estuary. There has been concern over the use of this spit	Yes	Yes	Management of spit important in determining the behaviour of the estuary and the dune system at poppit sands	Regional	R	Region	No	Yes	Maintain function of caravan park for holiday makers
172	H041	Gwbert	Listed Building	Remains of pre Norman house	Situated on the beach	Yes	Yes	Listed Building	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting



PDZ5 Teifi - Pen y Bal to Traeth y Gwyrddon

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
173	H041a	Craig y Gwbert	SAM	Defended enclosure SAM	on headland, may experience loss of land due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
174	E013	Aberarth - Carreg Wylan and Cardigan Bay	SAC and SSSI	SAC and SSSI	Risk of loss of habitat due to coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (ecology/habitat and geology)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
175	F093	Gwbert	Properties	Residences and Cliff Hotel	Cliff hotel located within 20-30m from the edge of the cliff. Subject to loss due to coastal recession	Yes	Yes	Large Hotel	Local	HA	Local community	No	No	Prevent loss of hotel/ dwellings to coastal recession
176	F094	Mwnt	SSSI	SSSI	Risk of loss of habitat due to coastal recession. Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	Sea cliffs, coastal grassland, dune, flushes and screes. Rich flora and some local rarities. Includes two SSSIs.	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
177	H042	Mwnt	SAM	religious features, mortuary, chapel	At risk of loss due to SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
178	F094a	Mwnt	Coastal Road	Road above Mwnt beach	Council is concerned about erosion at the rear of Mwnt Beach.	Yes	Yes	Coastal road and access to Mwnt	Local	HA	Local Community (Ferwid Community Council)	No	Yes	Maintain access
179	F095	Mwnt	Access	Beach, concrete steps and sleeper bridge	Popular beach for recreation, access to beach is at risk, SLR could impact Mwnt beach, beach is retreating slowly	Yes	Yes	Paths, car park and road at risk on NT land	Local	R	Local Community	No	No	Maintain access to beach for recreation
180	F096	Mwnt	SSSI	Cliffs surrounding Mwnt beach SSSI	Risk of loss of habitat due to coastal recession. Changes to natural coastal processes (e.g. erosion, deposition, transport) essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system

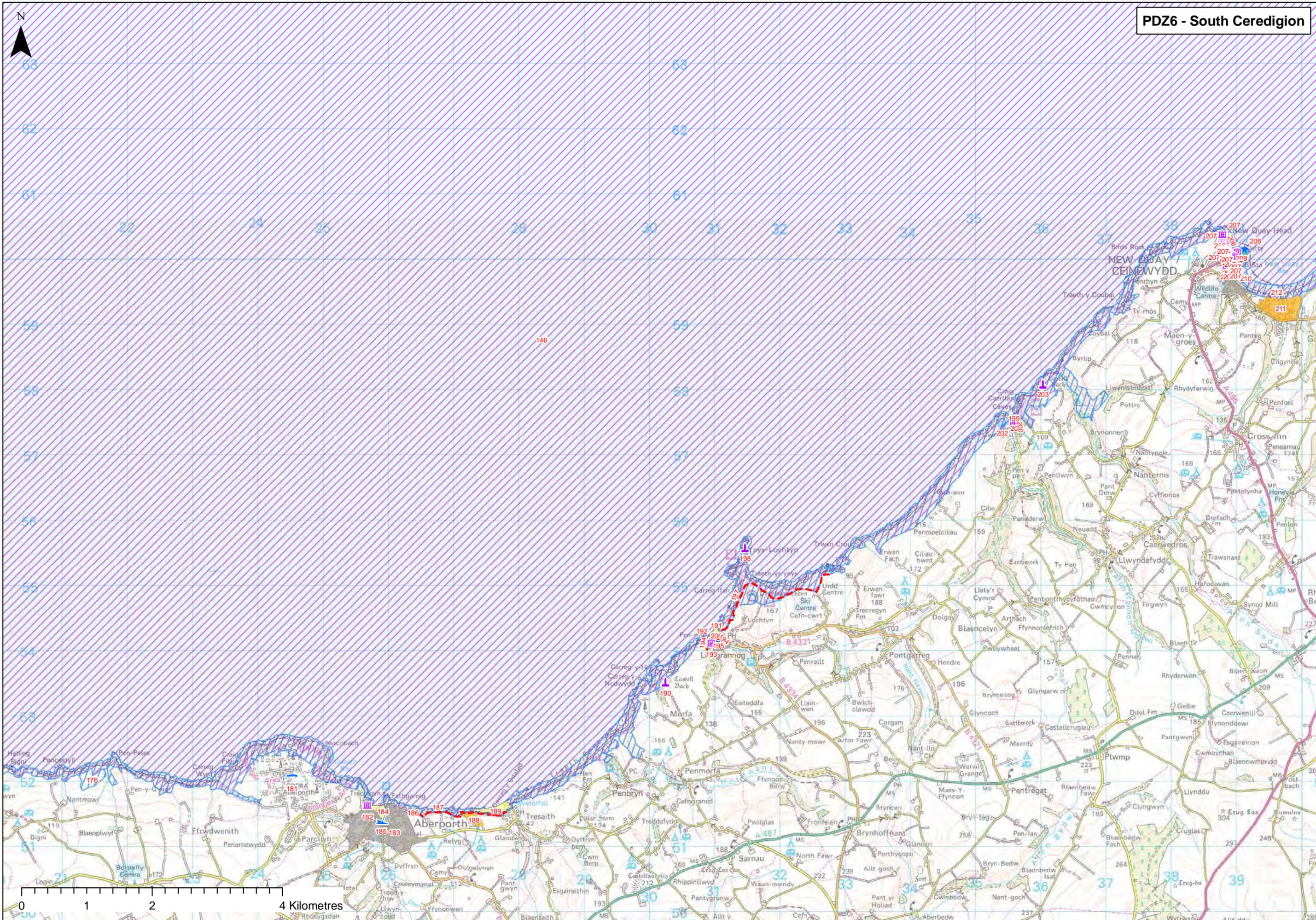


0 1 2 4 Kilometres

1:50,000

PDZ6 South Ceredigion - Traeth y Gwyrddon to Carreg Walltog

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
181	F097	Aberporth	Coastal Road	Ministry of Defence; Royal Aircraft Establishment	Located on top of a cliff near Aberporth, this site for the aircraft base may need relocating in the future due to coastal recession, not considered an immediate risk	Yes	Yes	RAF base	National	HA	National Community	No	Yes	Maintain function of aircraft base
182	H042a	Aberporth	Listed Building	Cadw Listed Building 'Dolewen'	Situated on west side of Dolwen beach, fairly close to the edge of the cliff, may be lost with coastal recession	Yes	Yes	Listed Building	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting
183	F098	Aberporth	Boating / Shipyards	Boat Club	The Aberporth Boat Club members are currently considering the possibility of constructing a small marina by constructing a breakwater from Carreg Bicca at the eastern entrance to the bay and interest has been expressed by the Royal Yachting Association in this endeavour. In addition, or independently of this scheme, proposals have been put forward for the construction of a launching ramp from the Middle Rocks	Yes	Yes	The impact this development may have on the beach itself will need consideration	Local	R	Local Community	No	Yes	Maintain the operation and potential development of the boat club
184	F099	Aberporth Beach	Beach	Beach	Principal source of material is from the offshore or nearshore sandy bed. There is limited erosion along the frontage and therefore limited sediment input from within the unit. There may be some limited drift to the north east in the offshore area. Although relatively stable at present, changes in wave or tide climates may result in increased pressure of erosion. If retreat were resisted, without action to modify the wave energy, this could lead to a decrease in beach levels	Yes	No	Beach is very popular for recreation and bathing, also for tourists, quaint character of town	Regional	R	Regional Community	Yes	No	Maintain use of beach for recreation
185	F100	Aberporth	Properties	Residential Properties	May be at risk of loss due to coastal recession in the future	Yes	Yes	Peoples homes/holiday homes. The area is very popular for recreation and bathing, also for tourists, quaint character of town	Regional	HA	Regional Community	No	No	Prevent loss of properties to erosion/SLR
186	F101	Aberporth cliffs	Properties	Residential Properties	Located close to cliff edge, may be at risk due to coastal recession	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties to erosion/SLR
187	F102	Aberporth cliffs	Footpath	Coastal Path	Located close to cliff edge, may be at risk due to coastal recession	Yes	No	Pedestrian access/ right of way	Local	R	Local Community	No	Yes	Maintain function of coastal path for public right of way
188	F103	Tresaith	Caravan/Holiday Park/Camp Site	Caravan Park	Located close to cliff edge, may be at risk due to coastal recession	Yes	Yes	Popular tourist location	Local	R	Local Community	No	Yes	Maintain function of caravan park for holiday makers
189	F104	Tresaith	Beach	Beach	Slowly receding, but not a major issue. May experience problems due to SLR in the future	Yes	Yes	Important beach for recreation and tourism	Regional	R	Regional Community	No	No	Maintain use of beach for recreation
190	H042b	Penbryn	SAM	Castell Bach SAM	Hillfort located on small rocky headland, may experience some loss of land with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and its setting
191	F105	Llangrannog	Beach	Beach and slipway	At present, although there is likely to be continued erosion of clay overlying and embedded within the rock cliffs, overall the frontage will not evolve significantly. The defence line along Llangrannog village frontage in effect protrudes into the active foreshore zone and will be subject to periodic erosion. Increased wave action or sea level rise will aggravate this process and may result in a decrease in beach levels generally across the village frontage.	Yes	Yes	Important beach for recreation and tourism	Regional	R	Regional Community	No	No	Maintain use of and access to beach for recreation
192	H043	Llangrannog	Boating / Shipyards	Shipyards	Few stores and shipyards from 18th century may be at risk due to SLR	Yes	Yes	Archaeological significance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and its setting
193	H043a	Llangrannog	Listed Building	Lime Kiln Cadw Listed Building	Slightly inland, although may experience flooding with SLR	Yes	Yes	Listed Building	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting
194	F106	Llangrannog	Access	Access Road into town and car park	Sat on top of a promenade, very close to the coastline and at risk of being lost to recession, sea wall is maintained as a highway wall, not coast protection	Yes	Yes	Access to popular recreational town	Regional	HA	Regional Community	No	Yes	Maintain access and parking facilities
195	F107	Llangrannog	Properties	Residential Properties	Very close to beach, at risk of flooding/loss due to SLR and coastal recession	Yes	Yes	Dwellings, character of town	Local	HA	Local Community	No	No	Prevent loss of properties to erosion/SLR, maintain character of Llangrannog
196	F108	Llangrannog	SSSI	SSSI	Bottlenosed dolphins, seals rare species	Yes	Yes	National nature conservation interest (ecology/habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
197	F109	Llangrannog	Footpath	Footpath access to beach	Increase in shingle at beach crest restricts access to lower beach. No seaward footpath to road.	Yes	Yes	Access to beach	Local	HA	Local Community	No	Yes	Maintain access to beach for boating/recreation
198	H043b	Ynys Lochtyn	SAM	Ynys Lochtyn Defended Enclosure SAM	Located on a rocky peninsular, this may suffer loss with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and its setting
2003		Llangrannog	Properties	Services to properties	Buried beneath the properties, close to receding cliff edge	Yes	Yes	Provide infrastructural services to Llangrannog	Local	HA	Local Community	No	Yes	Maintain provision of services to Llangrannog community.



PDZ7 New Quay Bay - Carreg Walltog to Gilfach yr halen Holiday Park

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
199	F110	Cwmtwydy	Car Park	Car Park	Very close to beach, at risk of flooding/loss due to SLR and coastal recession	Yes	Yes	Parking for use of beach	Local	HA	Local Community	No	No	Maintain use of car park for visitors/residents
200	F111	Cwmtwydy	Coastal Road	Coastal Road	At risk of loss due to coastal recession	Yes	Yes	Access to beach, coastal throughroad for Cwmtwydy caravan park and town	Local	HA	Local Community	No	Yes	Maintain access
201	F112	Cwmtwydy	Properties	Cottages	Coastal Cottages, located along the river are at risk of flooding due to an increase in SL	Yes	Yes	Dwellings, character of town	Local	HA	Local Community	No	No	Prevent loss of properties to SLR/erosion
202	H043c	Cwmtwydy	Listed Building	Former Lime Kiln Cadw LB	Prominently situated on a road opposite the beach, this feature may be lost to SLR	Yes	Yes	Listed Building	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
203	H043d	Cwmtwydy	SAM	Castall Bach SAM	This hillfort is situated on the edge of the rocks north east of Cwmtwydy, may suffer some loss with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
204	F113	Cwmtwydy-New Quay head	SSSI	SSSI	Risk of loss of habitat due to coastal recession	Yes	Yes	National nature conservation interest	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the site and interest features within the context of a dynamic coastal system
205	F114	New Quay	Properties	Residential properties and the access roads to these houses and pathways	Properties are on a very steep cliff very close to the shore, with coastal recession these may be lost, recently, residents have been protecting property by their own means of construction.	Yes	Yes	Dwellings, character of town	Regional	HA	Regional Community	No	No	Prevent loss of properties to erosion/SLR
206	F115	New Quay	Footpath	Footpath along beach of Traeth Cei Newydd	Located on the shingle ridge at the foot of the steep coastal slope regularly flooded and may possibly suffer loss due to SLR	Yes	Yes	Access along beach	Local	HA	Local Community	No	Yes	Maintain use of public right of way
207	H044	New Quay	Listed Building	Many cadw listed buildings	many buildings located within close proximity to the rocks/ beach, may suffer loss or flooding in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
208	F116	New Quay	Pier	Stone Pier	Has been extended a number of times in the past, providing a broad drying beach to the south, between this pier and the Penpolian Jetty, removal or possible loss due to SLR will impact the bay as this is an important anchor point for the crenulate bay.	Yes	Yes	Popular beach to the south of the pier for recreation and a harbour is created by this pier for commercial fishing. Storage of boats on the pier in the winter	Regional	HA	Regional Community	No	Yes	Maintain use of pier both for recreation and for defence purposes
209	F117	New Quay	Harbour / Marina	Harbour mouth	Due to siltation of the harbour access into harbour will require attention	Yes	Yes	Access for boats	Regional	C	Regional Community	No	No	Maintain access into the harbour
210	F118	New Quay	Lifeboat/ Lifeguard Station	RNLI Station	Located to the south of the Penpolian Jetty, very close to the shore line, may need relocation due to coastal recession	Yes	Yes	Rescue station for offshore rescue	Regional	HA	Regional Community	No	Yes	Maintain the function of the lifeboat station
211	F119	New Quay Bay	Caravan/Holiday Park/Camp Site	Caravan Parks and Holiday camps	Behind shingle ridge and located on vegetated land, however at risk of flooding/loss due to coastal erosion. Landslip issues have been occurring in this area, large crack in the land due to landslip	Yes	Yes	New quay not only relies on fishing but also tourism, caravan parks provide most of the accommodation in this bay	Local	R	Local Community	No	Yes	Maintain function of caravan park for holidaymakers and sustain tourism in New Quay
213	F121	Llanina Point	Caravan/Holiday Park/Camp Site	Caravan Park	Breakwater is an important feature, as an anchor point for the bay, prevents erosion of beach and caravan park.	Yes	Yes	important to coastal processes of bay	Local	R	Local Community	No	Yes	Maintain function of Caravan Park
215	F123	Little Quay Bay	Caravan/Holiday Park/Camp Site	Caravan and camping park	Close to shore, possible problems in the future due to coastal recession, groynes currently in place in front of caravan site and houses	Yes	Yes	Tourism, dwellings for residents	Local	R	Local Community	No	Yes	Maintain function of caravan park for holidaymakers
216	F124	New Quay and Little Quay Bays	SSSI	SSSI	Risk of loss of habitat due to coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology/habitat and geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
217	F125	Gilfach-yr-Halen	Caravan/Holiday Park/Camp Site	Holiday Village	Resting 10-20m from edge of cliff, likely to be lost due to coastal erosion	Yes	Yes	Tourism, dwellings for residents	Local	R	Local Community	No	Yes	Maintain function of holiday park
2004		New Quay Bay	Properties	Services to properties	Buried beneath the properties, close to receding cliff edge	Yes	Yes	Provide infrastructural services to New Quay Bay	Local	HA	Local Community	No	Yes	Maintain provision of services to New Quay Bay community.



NEW QUAY / CEINIEWYDD

New Quay Head

Gilfachreda

Gilfach-yr-Halen

0 1 2 Kilometres

PDZ8 Aberaeron Plateau - Gilfach yr halen Holiday Park to Carreg Ti-pw

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
218	F126	Aberaeron	Properties	Residential properties	Residences are located close to the shoreline, groyne currently are holding this shingle beach in place.	Yes	Yes	Dwellings, important to consider SLR	Local	HA	Local Community	No	No	Prevent loss of properties to SLR and erosion
219	F127	Aberaeron	Harbour / Marina	Harbour	There has been a general concern with respect to the condition of the harbour walls. A strategy study has been undertaken and a programme of remedial action is in place	Yes	Yes	The harbour is totally surrounded by vertical concrete or masonry walls, many over 100 years old.	Regional	HA	Regional Community	No	No	Maintain use of harbour and character of aberdaron
220	F128	Aberaeron	Slipway and Access	Slipways and steps to beach	Access to beach may deem a problem in the future with SLR	Yes	Yes	Access to beach/ recreation	Local	R	Local Community	No	Yes	Maintain access to beach for boating/recreation
221	H045	Aberaeron	Listed Building	Many listed buildings	many buildings located within close proximity to the rocks/ beach, may suffer loss or flooding in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
221		Aberaeron	Sewage Works	Sewage pumping station	Located close to the shoreline, at risk of damage/ loss	Yes	Yes	Sewage pumping station for Aberaeron	Local	HA	Local Community	No	Yes	Maintain the function of a sewage pumping station for Aberaeron
222		Aberaeron	Caravan/Holiday Park/Camp Site	Caravan Parks	Situated behind an embankment close to the shoreline	Yes	Yes	Recreation/ Holiday makers	Local	R	Local Community	No	Yes	Maintain function of a caravan park for holidaymakers
222	F130	Aberarth	Properties	Properties	Village, close to coastline, at risk of losing proerties due to future coastal recession	Yes	Yes	Dwellings, quaint small village, groyne currently in place to provide protection of shingle beach in front of town	Local	HA	Local Community	No	No	Prevent loss of properties to SLR and erosion
223	H046	Aberarth	Listed Building	Many listed buildings, chapel etc	Many buildings located within the coastal flood zone, may suffer loss or flooding in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
224	F131/E014	Creigiâu Aberarth to Morfa	SSSI	SSSI	Risk of loss of habitat due to coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology/habitat and geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
225	F132	Llannon	Hotel	Hotel and caravan park	Hotel is situated close to shingle beach, low lying land, may be at risk due to SLR. Non official defence of telgraph poles has been put in place in front of hotel and has been creating a small headland to the slowly eroding cliff line	Yes	No	Properties, caravan park for holidaymakers	Local	HA	Local Community	No	No	Prevent the loss of hotel and caravan park
226	H047	Llannon	Listed Building	Blacksmiths workshop/ listed churches	At risk of loss due to coastal erosion.SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
227	E015	Traeth Llanon	SSSI	SSSI	Risk of loss of beach due to SLR, but has geological interest, erosion / natural processes is not discouraged	Yes	Yes	National nature conservation interest (ecology/habitat and geology)	National	E	National	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
228	F133	Llansantffraed	Properties	Properties	A few properties are only 40m from shoreline, on 5m elevation,at risk of being lost to coastal recession	Yes	Yes	Dwellings, small settlement	Local	HA	Local	No	No	Prevent the loss of residential property to erosion
229	H048	Llansantffraed	Historical	Fish traps	situated on the coast, likely to be lost with coastal recession	Yes	Yes	Archaeological significance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
230	H049	Llanrhystud	Historical	Aberstrincell or Graiglas Limekilns	situated on the coast, likely to be lost with coastal recession	Yes	Yes	Archaeological significance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
231	F134	Llanrhystud	Car Park	Small car park	Small car park from Llanrhystud to the beach south of the caravan park, provides acces to long shingle beach	Yes	Yes	For use of shingle beach	Local	R	Local	No	Yes	Maintain the use of the car park for visitors/recreation
232	F135	Llanrhystud	Caravan/Holiday Park/Camp Site	Caravan Parks	On low lying ground, close to coastline, likely to be lost to coastal erosion	Yes	Yes	Tourism and recreation	Local	R	Local	No	Yes	Maintain function of caravan park for holidaymakers

PDZ9a Aberystwyth - Carreg Ti-pw to Sarn Gynfelyn

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
233	E016	Creigiau Pen Y Graig	SSSI	SSSI	Risk of habitat loss as cliffs recede. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology/habitat)	National	E	National	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
234	E017	Creigiau cwm - ceriw a ffos-las (Morfa Bachan)	SSSI	SSSI	Risk of habitat loss due to beach erosion. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology/habitat)	National	E	National	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
235	F136	Morfa Bychan	Caravan/Holiday Park/Camp Site	Caravan park	On low lying ground, close to coastline, likely to be lost to coastal erosion	Yes	Yes	Tourism and recreation	Local	R	Local	No	Yes	Maintain function of caravan park for holidaymakers
236	E018	Allt wen a traeth tanybwllch	SSSI	SSSI	Risk of loss as coastline recedes	Yes	Yes	National nature conservation interest (ecology/habitat)	National	E	National	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system

Yes



ABERYSTWYTH



0 1 2 4 Kilometres

PDZ9b Aberystwyth - Carreg Ti-pw to Sarn Gynfelyn

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
238	H050	Aberystwyth	Historical	Tramway	Disused tramway, used for Tanybwllch, in 19th century	Yes	Yes	Archaeological significance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the site and it's setting
239	F137	Tany Bwlch	Access	Estuary Mouth	Erosion of Tan y Bwlch Beach has in the past threatened to divert the course of the Afon Ystwyth. This would have a significant effect on the entrance channel and harbour entrance.	Yes	Yes	Access to harbour, major fishing port	Regional	C	Regional	No	No	Maintain continued access to estuary
240	F137	Tany Bwlch	Properties	Properties	Erosion of this shingle ridge/ SLR Would also greatly impact the properties to the north of the mouth of the Yswyth and the shape of the estuary	Yes	Yes	Dwellings	Local	HA	Local	No	Yes	Monitor migration of shingle spit to allow continued access to estuary
241	E020	Gweunydd Pendinas	SSSI	SSSI	Risk of becoming flooded/inundated with SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology/habitat)	National	E	National	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
242	F138	Aberystwyth	Pier	Old Stone Pier	IF this feature were to erode/fail it would have significant impacts on the harbour entrance	Yes	Yes	Protects south entrance to harbour	Regional	C	Regional		yes	Prevent loss of pier
243	F139	Aberystwyth	Harbour / Marina	Harbour/marina	With coastal recession and SLR this harbour has the potential to be at risk	Yes	Yes	Important for commercial fishing, recreation and is part of one of the largest settlements within the SMP	National	C	National		no	Maintain use of harbour and character of aberystwyth
244	H050a	Aberystwyth	SAM	Aberystwyth Castle	Located on a rocky headland, maby be impacted by SLR slightly	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
245	F140	Aberystwyth	Properties	Properties	The settlement of Aberystwyth is entirely along the coastline and in very close proximity to the beach. With SLR and coastal recession it is at risk	Yes	Yes	Large settlement	National	HA	National Community	No	No	Prevent loss of properties to SLR and maintain character of town
246	F141	Aberystwyth	Slipway and Access	Roads/Bridges/Promenades and slipways	Located close to the shore, and are at risk due to SLR and coastal recession, will require defending to sustain Aberystwyth	Yes	Yes	Provide access to enable use of the beaches and settlement	National	R	National Community	No	No	Maintain access to aberystwyth
247	H051	Aberystwyth	Listed Building	Muiltple Cadw listed buildings	At risk of flooding due to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
248	H052	Aberystwyth	Listed Building	Chapel	Located on the rocks opposite the college, late medieval chapelry to Llanbadarn Fawr parish, within the borough of Aberystwyth (now Aberystwyth parish). It was 'ruinated' in 1754, and had been lost to the sea by 1758	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
249	F142	Aberystwyth	Pier	Pier	Pavilion and Pier, on the Northern shore of Aberystwyth, protected by headland, however may be at risk with SLR	Yes	Yes	Pier important feature to Aberystwyth character	Local	HA	Local Community	No	Yes	Maintain function of pier
250	E022	Borth - Clarach	SAC and SSSI	SAC and SSSI	Risk of loss of habitat due to coastal recession / SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (ecology/habitat and geology)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
251	F144	Clarach Bay	Properties	Properties and caravan park	Low lying, close to shore, small settlement at risk of being lost to SLR	Yes	Yes	Dwellings and holidaymakers	Regional	HA	Regional Community	No	Yes	Prevent loss of properties and maintain function of caravan park
252	H052a	Wallog	SAM	Lime Kiln near Wallog Farm	situated on the seashore, 100m SW of Wallog, may suffer loss with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
253	F145	Wallog	Properties	Property	One farm/house located about 20m from cliff edge, however situated behind a sam which appears to be protecting this part of the shore line from eroding	Yes	No	Dwelling	Local	HA	Local Community	No	Yes	Prevent loss of property to SLR and erosion



ABERYSTWYTH

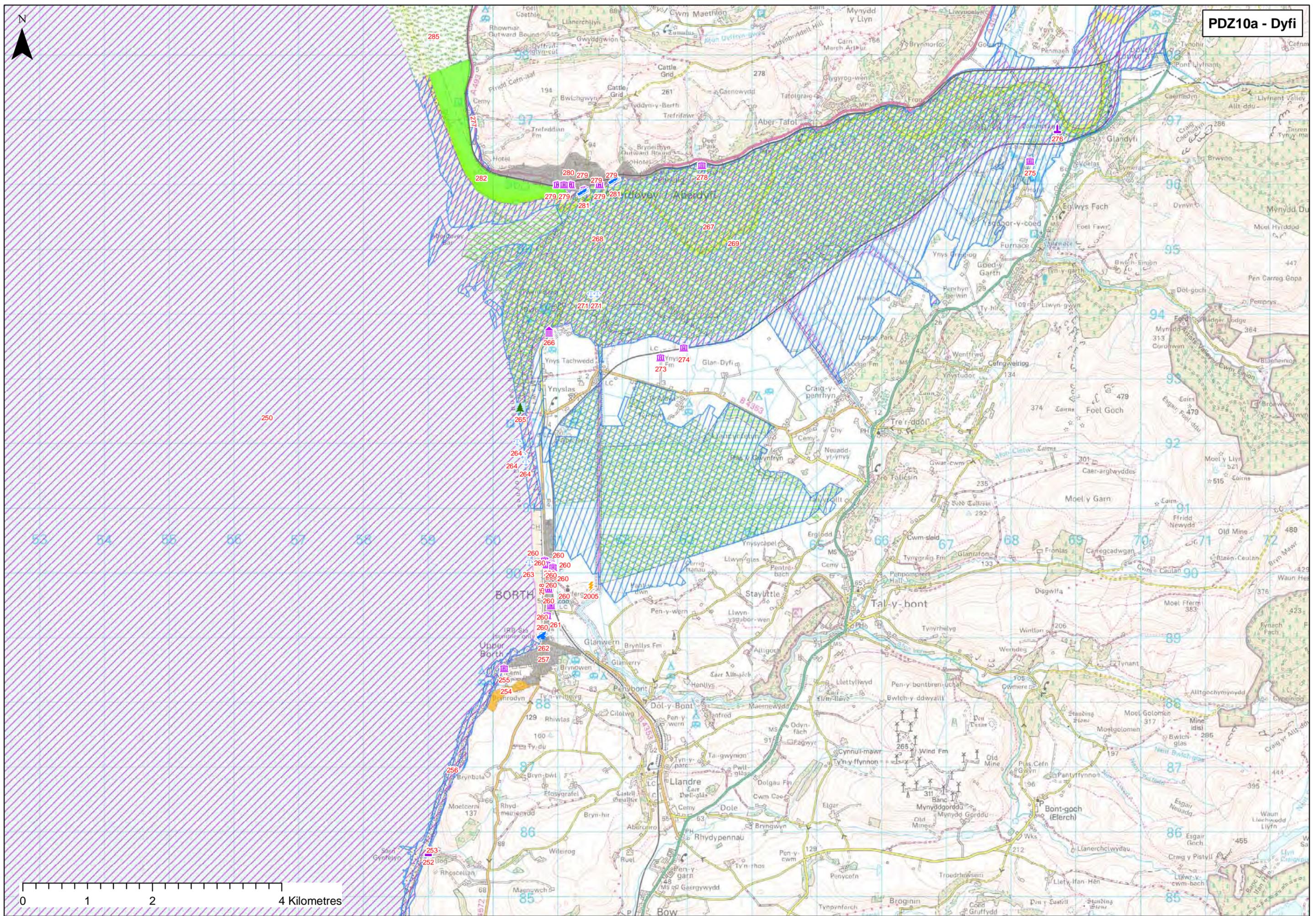
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PDZ10a Dyfi - Sarn Gynfelyn to Ton Fanau

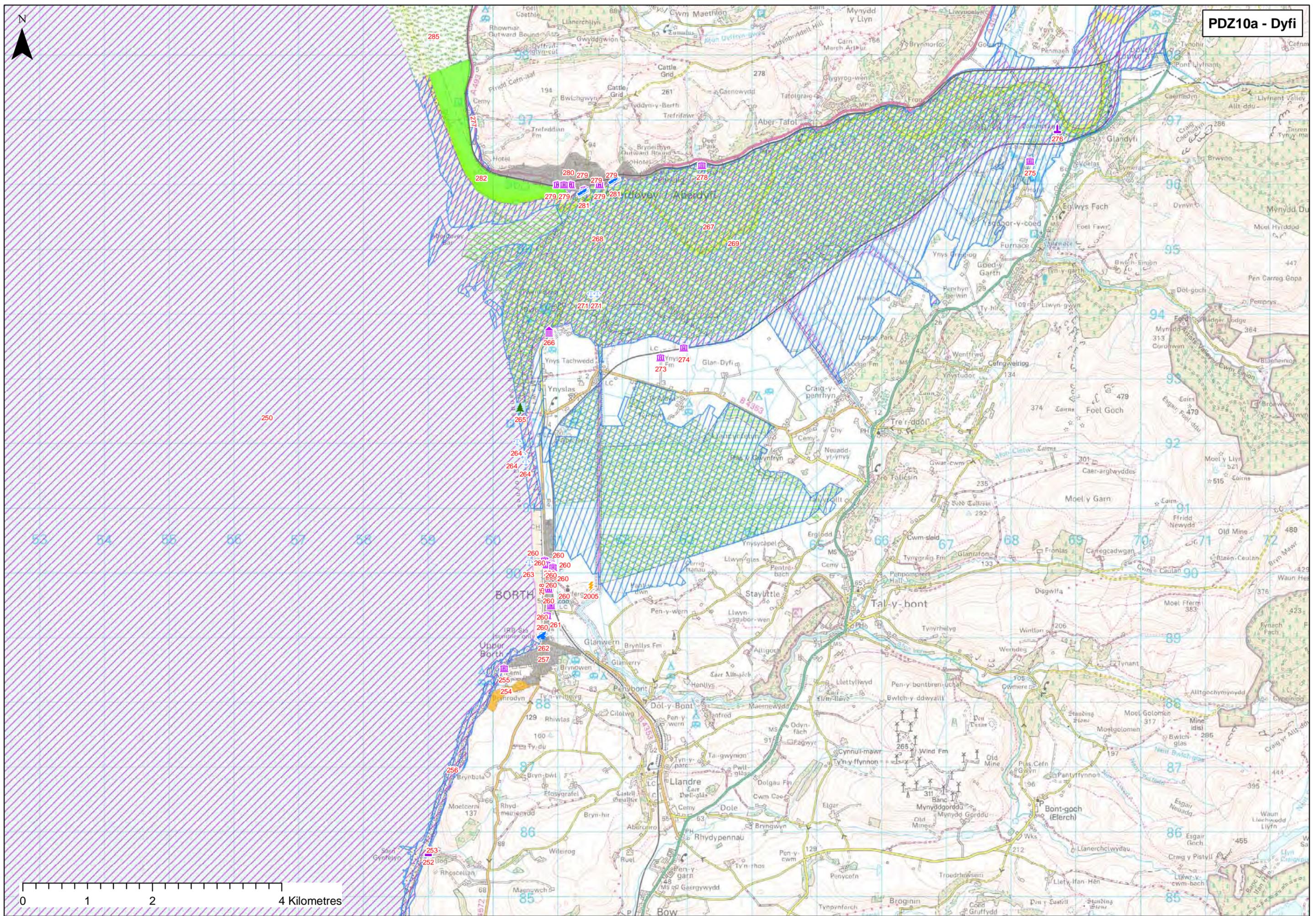
ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
254	F146	Upper Borth	Caravan/Holiday Park/Camp Site	Caravan Parks	Located on top of the cliffs south of Borth, unlikely to deem a problem due to SLR but possibly may be impacted by the recession of the cliffs	Yes	Yes	Holidaymakers, Borth is a popular recreational and tourism settlement	Regional	R	Regional Community	No	Yes	Maintain function of caravan park
255	H053	Upper Borth	Listed Building	Commemorative monument	War memorial is Cadw listed building, on a promontory over upper borth, close to cliff edge, may suffer with coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
256	F147	Upper Borth	SSSI	SSSI	Risk of loss of habitat (terrestrial) with SLR/ coastal recession	Yes	Yes	National nature conservation interest (ecology/habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
257	F148	Upper Borth	Properties	Properties	Close to cliff edge, may be at risk due to eroding of the cliffs	Yes	Yes	Protection of properties	Local	HA	Local Community	No	No	Prevent loss of property to SLR and erosion
258	F149	Borth	Coastal Road	Coastal road	Close to cliff edge, may be at risk due to eroding of the cliffs	Yes	Yes	access to large settlement of borth, through coastal road from aberyswyth	Regional	HA	Regional Community	No	No	Maintain access
259	F150	Borth	Properties	Coastal properties	Located behind wide sandy beach, protected by shingle bank and series of groynes. At risk of flooding/loss due to SLR	Yes	Yes	Fairly large settlement popular for holiday makers, potential to redevelop borth and increase use by proposed surfing reef and coastal defences	Regional	HA	Regional Community	No	No	Prevent loss of property to SLR and erosion
260	H054	Borth	Listed Building	Many listed buildings, chapel etc	Risk of loss with SLR and coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
261	F151	Borth	Slipway and Access	Slipway	At risk of being lost due to coastal erosion	Yes	Yes	Provides access for recreational use across shingle bank and down onto beach	Local	R	Local Community	No	Yes	Maintain access to the beach for boating/recreation
262	F152	Borth	Lifeboat/ Lifeguard Station	RNLI station	At risk of being lost due to coastal erosion	Yes	Yes	Provides rescue for recreational users of the beach, will become more important once surfing reef encourages more visitors to area	Regional	HA	Regional Community	No	Yes	Prevent loss of lifeboat station
262		Borth	Railway	Railway Station and Railway Line	At risk of becoming damaged/ lost due to coastal flooding	Yes	Yes	Transport link, main railway line and station for Borth	Regional	HA	Regional Community	No	No	Maintain function of railway line and station for the community of Borth
263	H055	Borth	Protected Wreck	Wreck Visible at Low tide	Risk of loss with SLR and coastal erosion	Yes	Yes	Protected Wrecks	Regional	H	Regional Community	No	No	To prevent deterioration or disturbance to historic wrecks
264	H056	Borth	Protected Wreck	three wrecks visible at low tide	Risk of loss with SLR and coastal erosion	Yes	Yes	Protected Wrecks	Regional	H	Regional Community	No	No	To prevent deterioration or disturbance to historic wrecks
265	H057	Borth Sands	Submerged Forest	Submerged forest	Risk of loss with SLR and coastal erosion	Yes	Yes	Archaeological and Geomorphological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
266	H058	Twyni Mawr	Historical	Anti landing obstacle	WW2 significance, Risk of loss with SLR and coastal erosion	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
267	F153/E023	Dyfi	National Nature Reserve	National Nature reserve	risk of loss due to flooding/SLR	Yes	Yes	National nature conservation interest	National	E	National Community	No	No	To maintain the conservation, amenity and education and research benefits of the NNR
268	E024	Cors Fochno and Dyfi	Ramsar	Ramsar	risk of loss of habitat with SLR/ coastal recession	Yes	Yes	National nature conservation interest	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the site and interest features within the context of a dynamic coastal system
269	F154/E025	Dyfi Estuary	SAC and SSSI	SSSI (Dyfi) and SAC (Lleyn Peninsular and the Sarnau) and GCR	Risk of loss of habitat with SLR/ coastal recession. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national nature conservation interest - Coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
270	F156	Aberdyfi	Railway	Railway line	Close to MHW mark in estuary, channel of river has potential to migrate, however may be a risk due to SLR	Yes	Yes	Main rail link to west wales	National	HA	National Community	No	No	Prevent loss of railway line
271	H059	Afon Leri	Protected Wreck	remains of two wrecks within the mudflats	Risk of loss with SLR and coastal erosion	Yes	Yes	Protected Wrecks	Regional	H	Regional Community	No	No	To prevent deterioration or disturbance to historic wrecks
272	F157	Dyfi Estuary	SAC and SSSI	SSSI (Dyfi) and SAC (Lleyn Peninsular and the Sarnau) and GCR	Risk of loss of habitat with SLR/ coastal recession. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national nature conservation interest - Coastal processes, spit formation, quaternary sediments, submerged forest and over 30 biological features	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
273	H060	Dyfi Valley	Listed Building	Listed buildings, dwellings	Risk of loss with SLR and coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
274	H061	Dyfi Valley	Listed Building	Military listed buildings	Risk of loss with SLR and coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
275	H062	Dyfi Valley	Listed Building	18th century farmstead/dwellings	Risk of loss with SLR and coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
276	H062a	Dyfi Valley	SAM	Domen Las SAM	on the edge of the dyfi river, may be lost with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
278	H063	Dyfi Estuary	Listed Building	Trefri Hall Cadw Listed Building	Located on a small rocky outcrop in the river, may experience flooding issues with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
279	H064	Aberdyfi	Listed Building	Many cadw listed buildings	Situated on the landward side of the coastal road, may have flooding issues in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
280	F158	Aberdyfi	Properties	Residences and properties	Close to edge of river, could suffer loss due to SLR or migration of the channel.	Yes	Yes	Popular area for recreation, outward bound centre, holiday village, hotels, museum	Regional	HA	Regional Community	No	No	Prevent loss of properties due to SLR/erosion
281	F159	Aberdyfi	Slipway and Access	Slipways, footpaths and jetties	Close to edge of river, could suffer loss due to SLR or migration of the channel. If channel migrates south, could increase width of mudflats in front of Aberdyfi and there fore create issues for access	Yes	Yes	Access issues	Regional	R	Regional Community	No	No	Maintain use of slipways and access to beach for boating/recreation
282	F160	Aberdyfi	Golf Course	Sand Dunes/ Golf Course	Restoration has occurred recently to the dunes with sand from the southern side of the estuary, area requires intervention	Yes	Yes	Popular area for golfing/recreation	Regional	R	Regional Community	No	No	Maintain sand dunes for recreational and environmental purposes
283	E026	Dyfi Estuary	SPA, SAC, Ramsar and SSSI	Dyfi Estuary SPA, Cors Fochno and Dyfi Ramsar, Lleyn Peninsular SAC and Dyfi SSSI	Risk of loss of habitat due to SLR. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national nature conservation interest for its ecology / habitat including bogs, marshes, water fringed vegetation, fens, sandflats and mudflats. SPA feature - greenland white-fronted goose. Geologically important providing a detailed rec	International and national	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, Ramsar, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system



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PDZ10a Dyfi - Sarn Gynfelyn to Ton Fanau

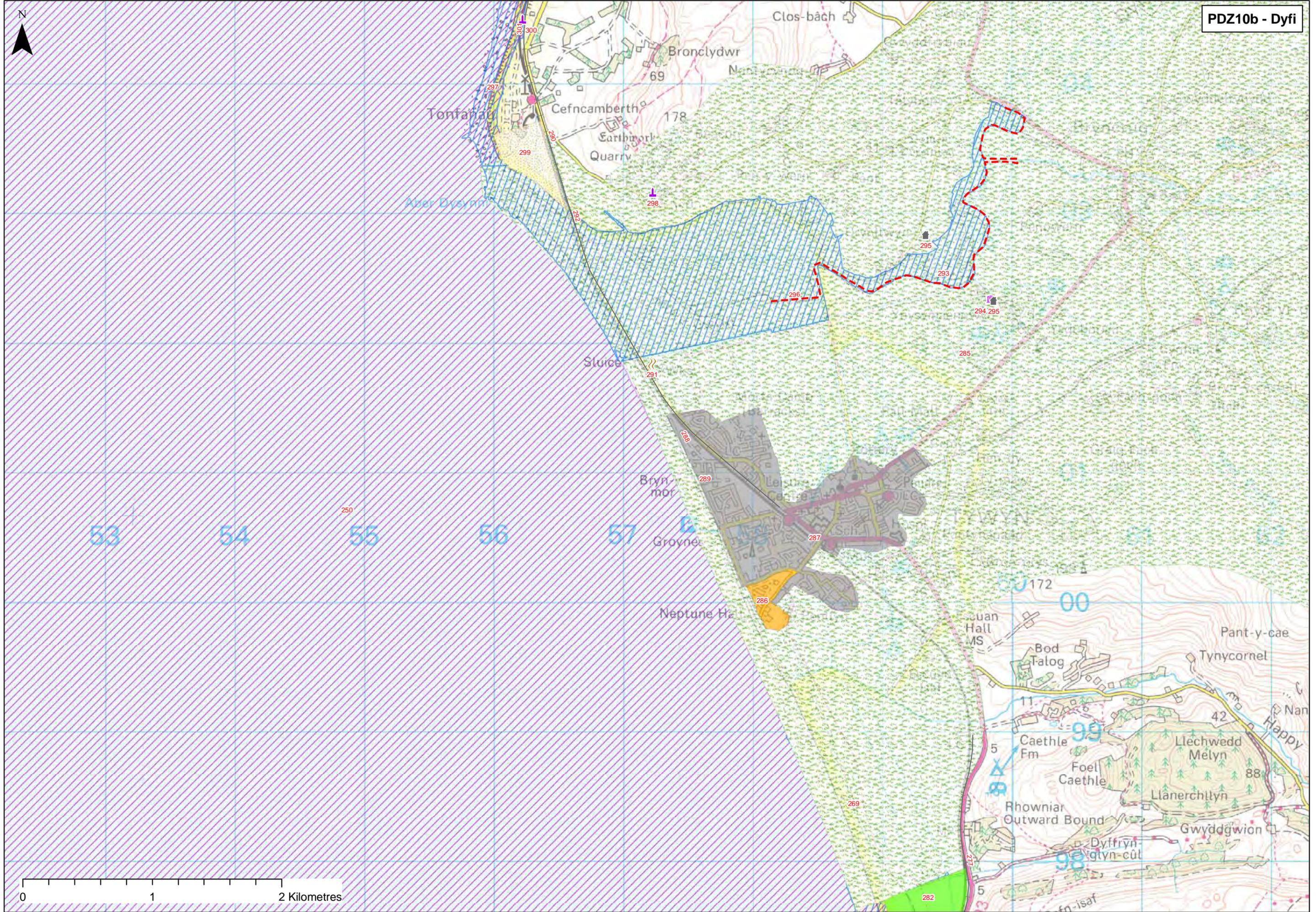
ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is there enough of this benefit	Potential for substitution	Objectives
284	F161	Aberdyfi	SSSI	Sand dunes/SSSI	Risk of loss of habitat due to SLR. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	Afon Dyfi estuary, a major estuary within Cardigan Bay, and is of international importance. It is a major feature of the cSAC	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
285	H065	Tywyn	Historic Parks and Gardens	South of Tywyn, Landscape of Special Historic Interest	This area covers land just south of Rhowniar to the dysynni river, extends coastwards, may suffer loss with coastal recession and SLR	Yes	Yes	Historic Parks and Gardens	National	H	National Community	No	No	To prevent disturbance to the interest feature and character
2005		Borth	Issue without Objective	Landfill site	Landfill site, may need removing/ protecting with SLR	Yes	Yes	Potential contaminated land, risk of exposure with erosion and SLR	Local	I	Local Community	No	Yes	Protect or remove landfill site if it is a risk to coastal erosion



0 1 2 4 Kilometres

PDZ10b Dyfi - Sarn Gynfelyn to Ton Fanau

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
277	F156	Aberdyif	Railway	Railway line	Close to MHW mark in estuary, channel of river has potential to migrate, however may be a risk due to SLR	Yes	Yes	Main rail link to west wales	National	HA	National	No	No	Prevent loss of railway line
286	F162	Tywyn	Caravan/Holiday Park/Camp Site	Caravan Parks	Tywyn is low lying, coastal town, at risk of flooding/loss due to coastal recession	Yes	Yes	Plans are in place to protect Tywyn as its an important recreational/holiday destination for Gwynedd	Regional	R	Regional Community	No	No	Maintain function of caravan park
287	F163	Tywyn	Properties	Settlement	HWM over the last 100years has advanced by 3m. The prospect for beach levels at Tywyn is continued lowering with consequent threat to sea wall and groyne integrity unless there is significant onshore movement of beach material which is unlikely with present trends of low water mark regression.	Yes	Yes	Protected by sea wall and groynes along frontage of tywyn. Works due to commence this year to protect Tywyn involving beach nourishment, rock groynes and a headland breakwater	Regional	HA	Regional Community	No	No	Prevent loss of tywyn properties due to SLR
288	F164	Tywyn	Coastal Road	Coastal road	Is located on a protruding part of beach, protected by sea wall, in line with unprotected coastline, suggesting potential loss due to coastal recession without sea wall	Yes	Yes	Access/ through road	Regional	HA	Regional Community	No	No	Maintain access
289	F165	Tywyn	Properties	Properties to the north of sea wall	Properties here are unprotected by the sea wall and as such are at risk of loss due to coastal erosion	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR and coastal erosion
290	F166	Tywyn	Railway	Railway line	Position is remarkably close to the shore, on a low shingle ridge protected with armour protection	Yes	Yes	Important transport link for west wales, shoreline reorientations have effectively starved both the Tywyn and British Rail defended frontages of beach material. As such, linear protection works are unsuitable and alternative approaches require consideration	National	HA	National Community	No	Yes	Prevent loss of railway line
291	F167	Tywyn	Sewage Works	Sewage works	Located behind the railway line and the coastal road, however at risk of loss due to recession	Yes	Yes	Sewage treatment for tywyn	Local	HA	Local Community	No	Yes	Prevent loss of sewage works
292	F168	Dysynni	Railway	Bridge and embankments	Low lying railway bridge, is spit breaches due to SLR, is likely to be lost	Yes	Yes	National Rail network	National	HA	National Community	No	Yes	Maintain railway line
293	F169/E027	Afon Dysynni	SSSI	Broadwater SSSI	Likely to be lost due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	A wide variety of coastal habitats including a large tidal lagoon, saltmarsh, a shingle spit, mud flats and reedbeds. The river is also an important part of the site. The saltmarsh is dominated by sea rush (Juncus maritimus) but has a number of nationally	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
294	H066	Tywyn	Listed Building	Ynysmaengwyn dovecote, Cadw listed buildings	Located on the floodplain of the Dysynni river, may have issues in the future with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
295	F170	Afon Dysynni	Properties	Properties along dysynni river	Potential flooding/loss due to SLR	Yes	Yes	Dwellings, character of estuary	Local	HA	Local Community	No	Yes	Prevent loss of properties due to rise in water levels
296	F171	Afon Dysynni	Footpath	Footpath	Follows course of the dysynni, close to the river bank, likely flooding/loss will occur due to SLR	Yes	Yes	Continual footpath for recreation/access	Local	R	Local Community	No	Yes	Maintain public right of way
298	H067	Tal y Gareg	SAM	Llechrwyd Hillfort SAM	Situated close to the river may experience flooding with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
299	F172	Tonfanau	Agriculture/Farming	Agricultural land	Eroding cliffs seaward of hinterland are protected by boulder beds on the upper foreshore, encouraging coarse sand and shingle to be driven onshore to form a strip beach against the cliff. Members of the Farmers Union Pembrokeshire, have voiced concern about the agricultural land suffering from flooding	Yes	Yes	If the promontory continues to erode there is little immediate threat regarding hinterland infrastructure. However, the receded promontory will increase erosion around the Dysynni outlet and the slate boulder breakwater may become outflanked	Local	C	Local Community	No	No	Prevent loss of agricultural land
300	F173	Tonfanau	SAM	Anti aircraft WW2 sites	At risk of being lost if cliffs continue to erode	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
301	F174	Rhoslefain	Railway	Railway line and footpath	Very close to eroding shoreline, at great risk of loss due to coastal erosion	Yes	Yes	National transport links	National	HA	National Community	No	Yes	Maintain railway line and public right of way



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Tonfafnach

Cefncamberth

Earthwork Quarry

Aber Dysynni

Sluice

Bryn-mor

Groyne

Neptune Ha

Clos-bâch

Bronclydwr

Juan Hall MS

Bod Talog

Caethle Fm

Foel Caethle

Rhowniar Outward Bound

Dyffryn-glyn-cûl

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PDZ11a Barmouth - Ton-fanau to Traeth Dyffryn (North of Afon Ysgethin)

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
297	E028	Tonfanau	SSSI	Glannau tonfanau I friog SSSI	Risk of loss of sssi with coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geological and marine biological features including its extensive natural mixed substrata shore, its nationally important honeycomb worm <i>Sabellaria alveolata</i> biogenic reefs, and its associated highly diverse corallin	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
302	H068	Llangelynin	Listed Building	Felin Fraenan Cadw listed building	Reasonably close to the coast seaward of the coastal road, may be lost as the coastline recedes	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
303	H069	Llangelynin	Listed Building	Church of Llangelynin cadw listed building	Landward of coastal road, this property may have issues with coastal recession in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
304	F175	Llangelynin	Caravan/Holiday Park/Camp Site	Camp site and properties	At risk of loss due to shoreline erosion. These cliffs are eroding especially in the vicinity of Llangelynin although the railway is significantly to landward here. It will be important to establish recession rates at the promontory at Llangelynin since these will be larger than to either side (at least in the short-term). The use of imported artificial boulder beds may provide a cost effective means of retarding cliff erosion locally along this frontage	Yes	Yes	Holidaymakers and dwelling, although fairly small settlement	Local	R	Local Community	No	Yes	Maintain function of campsite for visitors and prevent loss of properties due to erosion
305	F176	Llwyngwrl	Caravan/Holiday Park/Camp Site	Holiday Parks	On a rock outcrop promontory, however at risk of loss due to shoreline recession	Yes	Yes	holidaymakers and dwellings	Regional	R	Regional Community	No	Yes	Maintain function of holiday park
306	F177	Llwyngwrl	Properties	Properties	Located close to shore, and around the Afon Gwrl, likely to be lost to SLR, however boulder beds at Borthwen Point protect this area from eroding	Yes	Yes	Dwellings, settlement	Regional	HA	Regional Community	No	Yes	Prevent loss of properties due to SLR
307	F178	Gwastaddgoed	Caravan/Holiday Park/Camp Site	Caravan Parks	To the north-east of Borthwen Point there is active erosion of the hinterland which is intensified about a stream outlet. The caravan park has encroached too close to the shingle bank crest here and it is likely that some of the active shingle is now entrapped within the development.	Yes	Yes	It may be necessary to relocate some of the caravan pitches from along the shoreline and/or to reinforce the beach in this area (either by nourishment with a coarser material - upper beach or enhancement of the boulder beds - lower beach or both).	Local	R	Local Community	No	Yes	Maintain function of caravan park
310	H070	Fairbourne	SAM	Anti Invasion defences	This SAM runs the stretch of the coastline from the south of Ro Wen beach to the point where the railway lines turns inland, northeastwards	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
312	F182	Fairbourne	Properties	Properties	Directly behind coastal road, at risk of loss due to SLR and coastal recession	Yes	Yes	Dwelings, holidaymakers visiting Fairbourne	Regional	HA	Regional Community	No	No	prevent loss of properties due to SLR
313	F183	Fairbourne	Slipway and Access	Slipways	Access onto beach, may be lost with coastal recession	Yes	Yes	Access onto beach	Local	R	Local Community	No	Yes	Maintain use of slipway to facilitate beach use

Yes



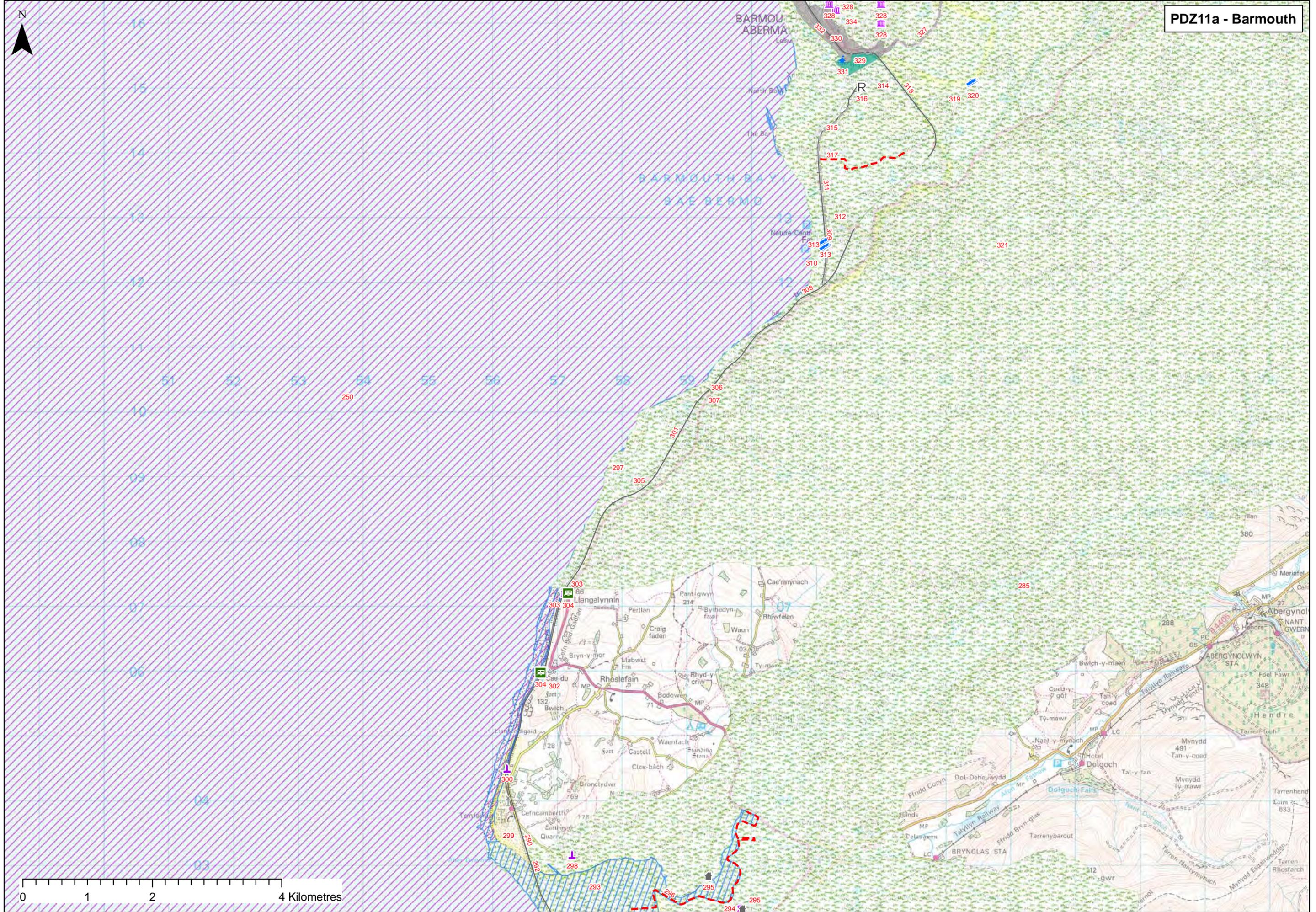
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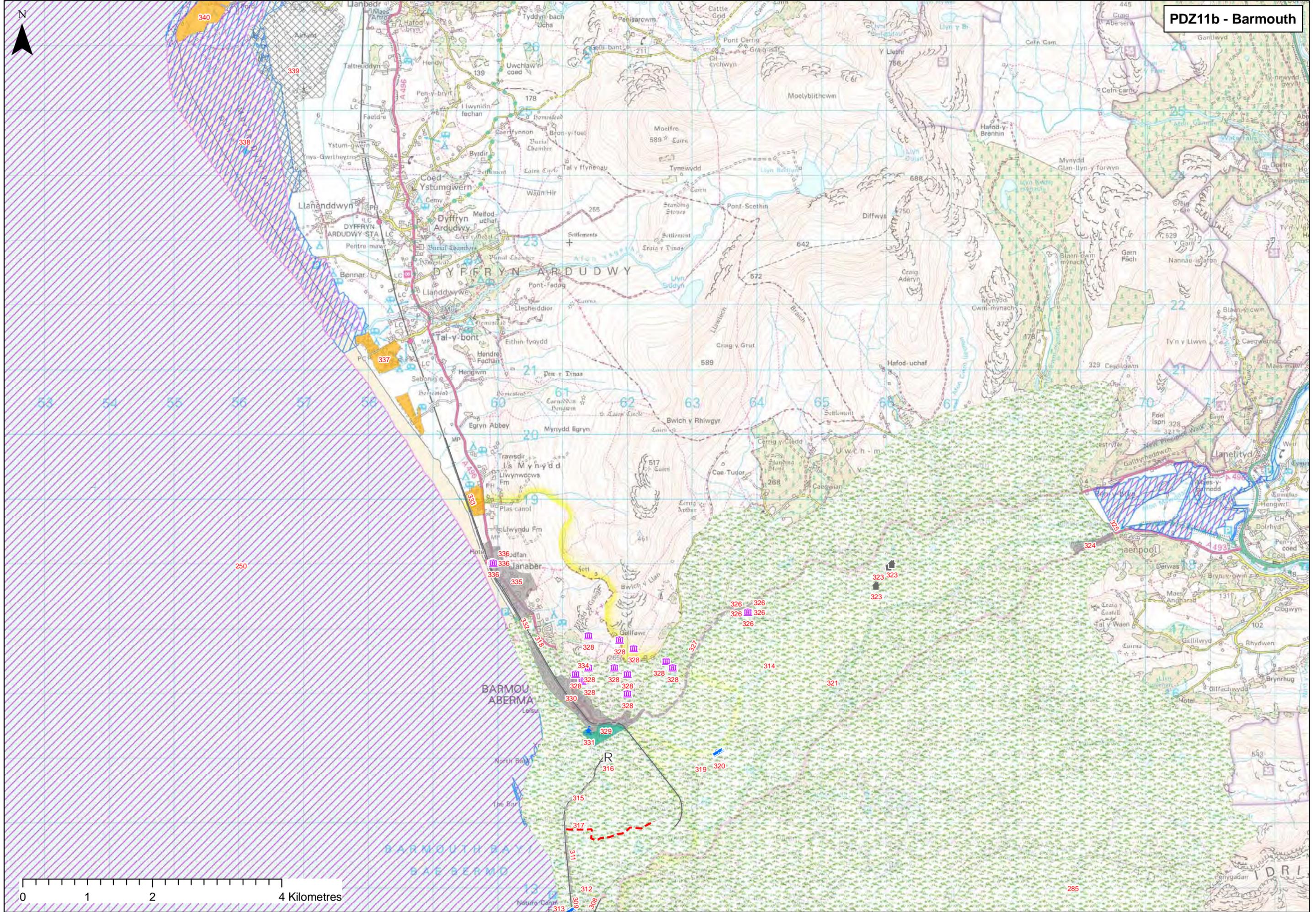
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PDZ11b Barmouth - Ton-fanau to Traeth Dyffryn (North of Afon Ysgethin)

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
308	F179	Gwastaddgoed	Railway	Railwayline	Very close to edge of eroding high cliffs, at risk of being lost due to cliff erosion and shoreline regression	Yes	Yes	National transport links	National	HA	National Community	No	No	Prevent loss of railway line
309	F180	Ro Wen	Railway	Railway line and frontage	This section of shoreline is in clear conflict with the marine dynamics with a narrow intertidal zone and clear difficulty in maintaining the coastal works supporting the railway. There is a need to raise the beach in this area if exposure of the coastal works is to be reduced. A progressive raising and widening of the intertidal zone could be considered as an alternative to ongoing strengthening of existing works	Yes	Yes	Railway line	Regional	HA	Regional Community	No	No	Prevent loss of railway line
311	F181	Fairbourne	Coastal Road	Coastal road	Located close to the shingle beach, low lying land, at risk of erosion	Yes	Yes	Access to Fairbourne along the coastline	Regional	HA	Regional Community	No	No	Maintain access
314	F185	Ro Wen	SSSI	SSSI	Risk of loss with coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
315	F186	Ro Wen Spit	Issue without Objective		The northern limit of the Ro Wen is now controlled by the estuary requirements and the Barmouth Jetty and railway viaduct. It has exhibited little plan movement over the last 100 years so that nett longshore drift to the north may now be quite weak. There is a sea defence constructed along its length although the cost effectiveness of these works north of the Fairbourne flood defences embankment is now questionable.			It may be that a breach in Ro Wen would affect navigation to Barmouth however, and also reduce Barmouth's protection to storms from the south-west.						
316	F187	Ro Wen	Railway	Penryhn point light railway station	Low lying on the edge of the spit, at risk of loss due to migration of the spit/SLR	Yes	Yes	Tourism	Local	R	Local Community	No	No	Maintain steam railway for visitors
317	F188	Ro Wen	Footpath	Footpath	Follows estuary, alongside mudflats, likely to flood due to SLR or be lost if estuary channel migrates	Yes	Yes	Public right of way	Regional	R	Regional Community	No	Yes	Maintain public right of way
318	F189	Barmouth Bridge	Railway	Viaduct and embankment	embankment cited at the southern end of the causeway, if breached or flooded my put the bridge at risk	Yes	Yes	Rail link and foot bridge	National	HA	National Community	No	Yes	Maintain embankment to sustain use of viaduct
319	F190	Afon Mawddach	Properties	Mawddac crescent properties	Located in a small bay behind rocky outcrops, protected from erosion, however not from SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
320	F191	Afon Mawddach	Slipway and Access	Slipways and quays	Likely to be lost to SLR or if channel migrates	Yes	Yes	Small slipway and quay for residents and recreational use	Local	HA	Local Community	No	Yes	Maintain use of slipway to facilitate beach use
321	H071	Abergwynant Woods	Historic Parks and Gardens	Historic Park and Gardento the south of the Mawddach river.	May suffer loss of land as water levels rise	Yes	Yes	Historic Parks and Gardens	National	H	National Community	No	No	To prevent disturbance to the interest feature and character
322	F192/E029	Afon Mawddach	cSAC, SSSI	cSAC, SSSI	Risk of loss of habitat due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
323	F193	Afon Mawddach	Properties	Mawddach estuary properties	Many located close to the estuary, risk of loss due to SLR	Yes	Yes	Dwellings, character of area	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
325	F195	Penmaepool	Coastal Road	Road bridge	Constraining estuary	Yes	Yes	Important for access and may also affect behaviour of the estuary in the future	Local	HA	Local Community	No	Yes	Maintain use of road bridge, monitor the effects it has on the behaviour of the estuary
326	H072	Cutiau	Listed Building	Glandwr Hall Cadw listed buildings	These listed farm houses and buildings are situated on the edge of the saltmarkland of the mawddach estuary. As sea levels rise, there may be flooding or loss of land	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
327	F196	Barmouth	Coastal Road	Road	Skirts close to the estuary and is low lying, risk of loss/flood in the future due to SLR	Yes	Yes	Main link into Barmouth	Regional	HA	Regional Community	No	Yes	Maintain use of road bridge, moitor effects it has on the behaviour of the estuary
328	H073	Barmouth	Listed Building	Many cadw listed buildings and Glan y Mawddach Historic Park	All located on the edge of the mawddach river, may have future issues and loss of land. An exceptionally interesting formal and woodland Edwardian garden in an outstanding position on the Mawddach estuary. The garden contains unusual secret compartments, each one of a different character, all linked by an intricate network of paths.	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
329	F197	Barmouth	Harbour / Marina	Barmouth Harbour	At risk of loss due to coastal recession, although held in place by breakwater	Yes	Yes	Heavily used for fishing and recreation	Regional	C	Regional Community	No	No	Prevent loss of harbour due to coastal recession
330	F198	Barmouth	Properties	Town of Barmouth	The breakwater has restricted flows entering the Mawddach and has likely resulted in accretion upstream as a consequence. The groynes are buried beneath the beach between the coastguard station and the Barmouth Breakwater. Along the Breakwater itself the groynes are not very effective and some of the groynes are having a detrimental effect on the local beach regime and should be effectively removed.	Yes	Yes	Protects town of barmouth however is having impacts on nearby towns and harbours along the estuary	Regional	HA	Regional Community	No	No	Maintain function of Barmouth town
331	F200	Barmouth	Lifeboat/ Lifeguard Station	RNLI station	The Barmouth promenade is located too far to seaward at its northern end beyond the coastguard station and the groyne system is ineffective in holding a satisfactory beach against the sea wall.	Yes	Yes	Important as erosion is occurring in front of seawall at present, in the future likely to be exacerbated	Regional	HA	Regional Community	No	Yes	Maintain use of lifeboat station
332	F201	Barmouth	Coastal Road	Promenade, coastal road, car parks	In an opposing position to the marine dynamics here, likely to suffer significant problems with future SLR and coastal recession	Yes	Yes	Character and function of Barmouth town	National	HA	National Community	No	No	Maintain promenade and character of barmouth

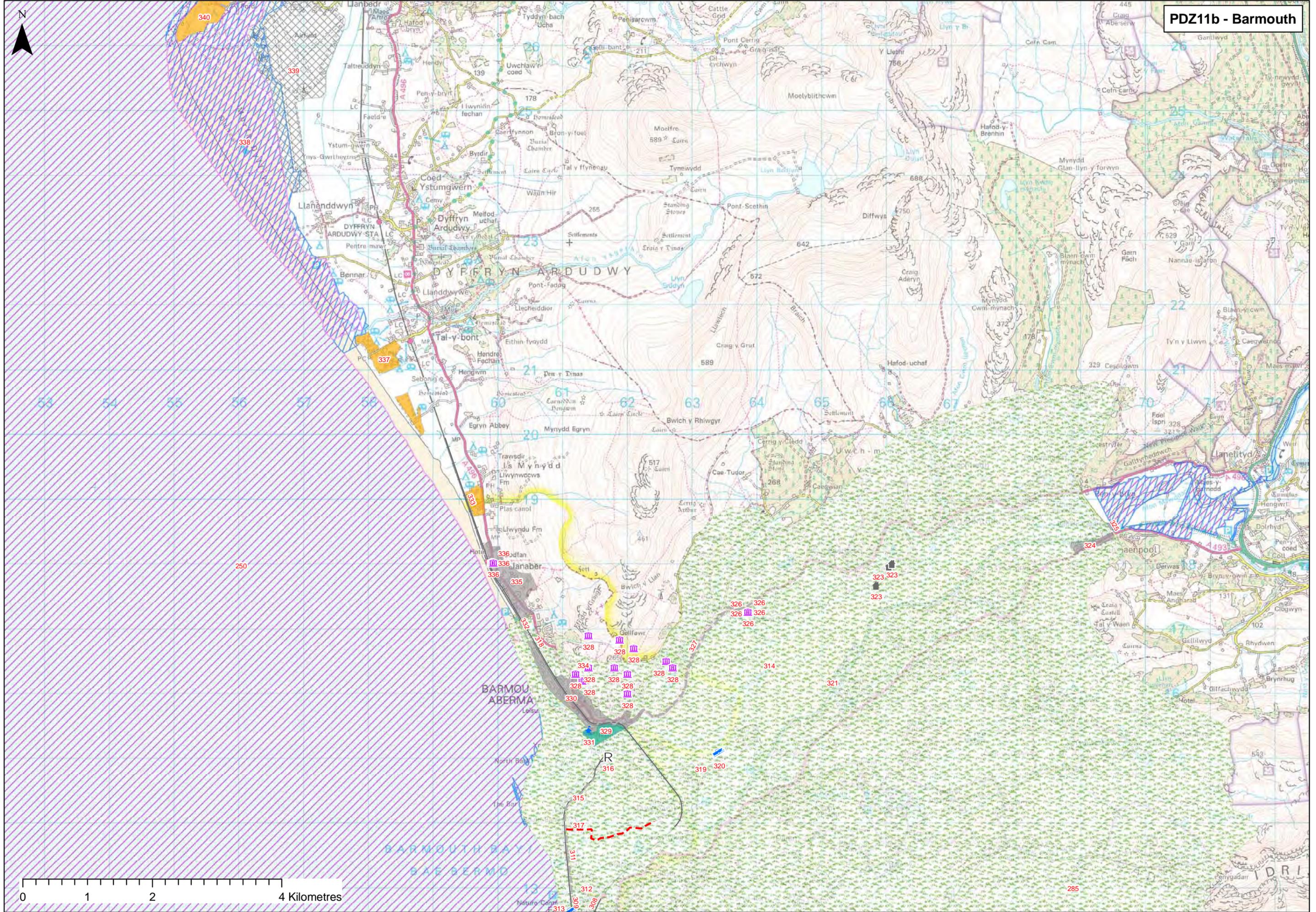


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PDZ11b Barmouth - Ton-fanau to Traeth Dyffryn (North of Afon Ysgethin)

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
333	F202	Barmouth	Railway	Railway line	North of settlement, railway line is at risk due to erosion, possible to see Barmouth frontage is held in place by hard structures and the coastline has receded back as far as the railway line	Yes	Yes	Main link into Barmouth	National	HA	National Community	No	No	Maintain railway line
334	E030	Barmouth	SAC, SSSI	Meirionnydd Oakwoods and Bat Sites SAC, Barmouth Hillside SSSI	Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national nature conservation interest - Geological site which exposes an almost continuous rock section. Woodlands and key features i.e. the Atlantic bryophyte and lichen assemblages	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
335	F203	Llanaber point	Properties	Residential properties and coastal road	Llanaber point forms a promontory with recessed shoreline either side. With further recession this feature may be at risk of being lost, North of the Point the shoreline is naturally protected by shingle banks but these are overtopped and shingle overflows into the lower hinterland at several locations, sea level rise will have a major impact on this area	Yes	Yes	Dwellings and access road	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR and maintain access
336	H074	Llanaber	Listed Building	Cadw Listed building, Parish Church of St Mary and St Bodfan	Situated seaward of coastal road and in close proximity to the shore, may be lost with SLR and coastal recession	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
337	F204	Llanaber	Caravan/Holiday Park/Camp Site	Holiday Parks	Located close to the coast, one fronted by a wide sandy beach however future SLR and coastal recession may cause this to be lost, the other, further north is situated seaward of the coastline. To the south there has been erosion and recession of the shingle bank from Llanaber Point to Afon Ysgethin. This area will have major problems with coastal recession in the future	Yes	Yes	Tourism	local	R	Local	No	yes	Maintain function of holiday park
338	F205/E031	Afon ysgethin to morfa dyffryn	SAC, SSSI	Morfa Harlech a Morfa Dyffryn SAC, Morfa Dyffryn SSSI	Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national nature conservation interest - Biological (terrestrial and marine inertial) and geomorphological features (sand dunes)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
324	F194	Penmaepool	Properties	Properties	At risk of flooding	Yes	Yes	Dwellings, character of area	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR

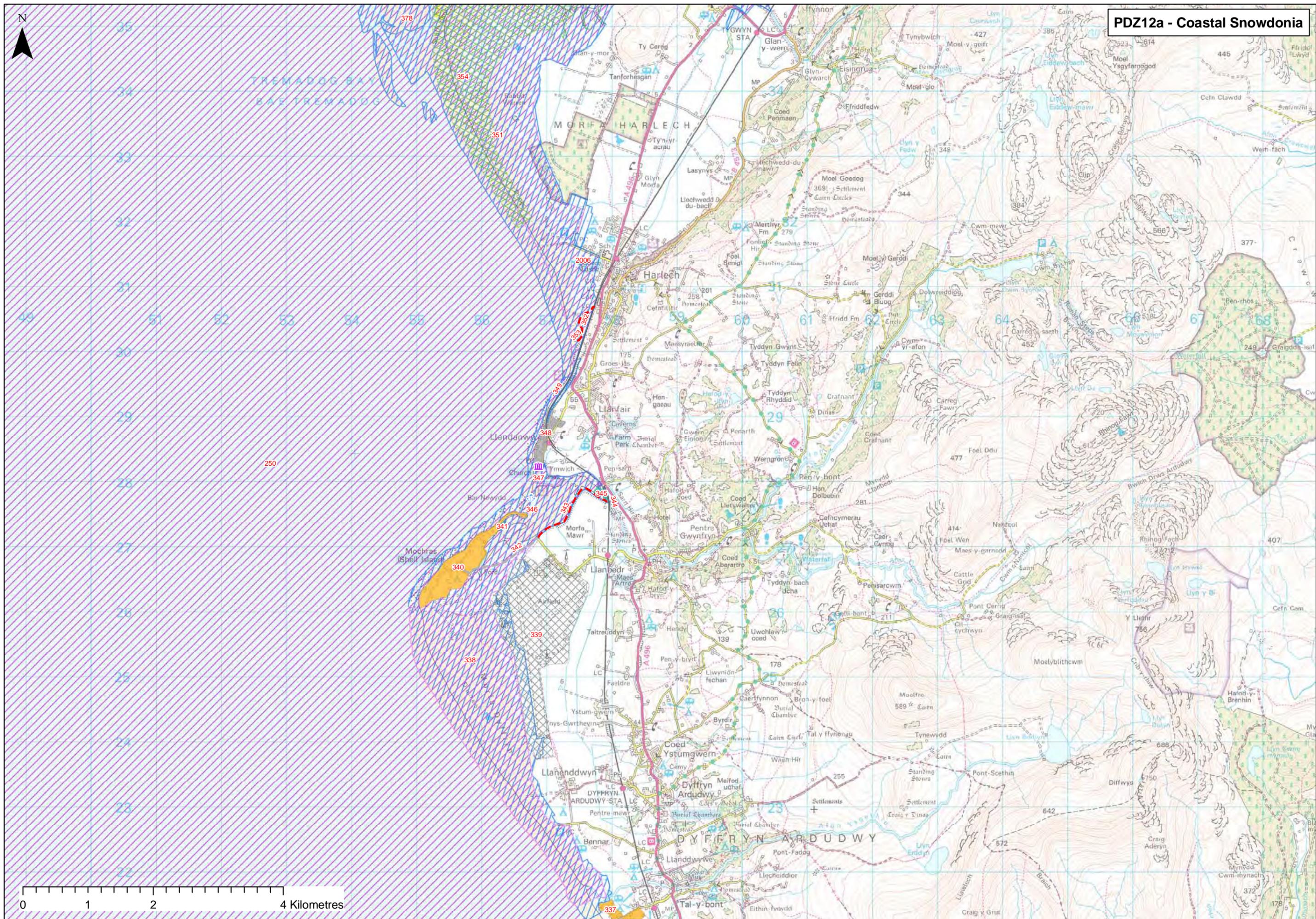


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285

PDZ12a Coastal Snowdonia - Traeth Dyffryn (North of Afon Ysgethin) to Pen y Chain

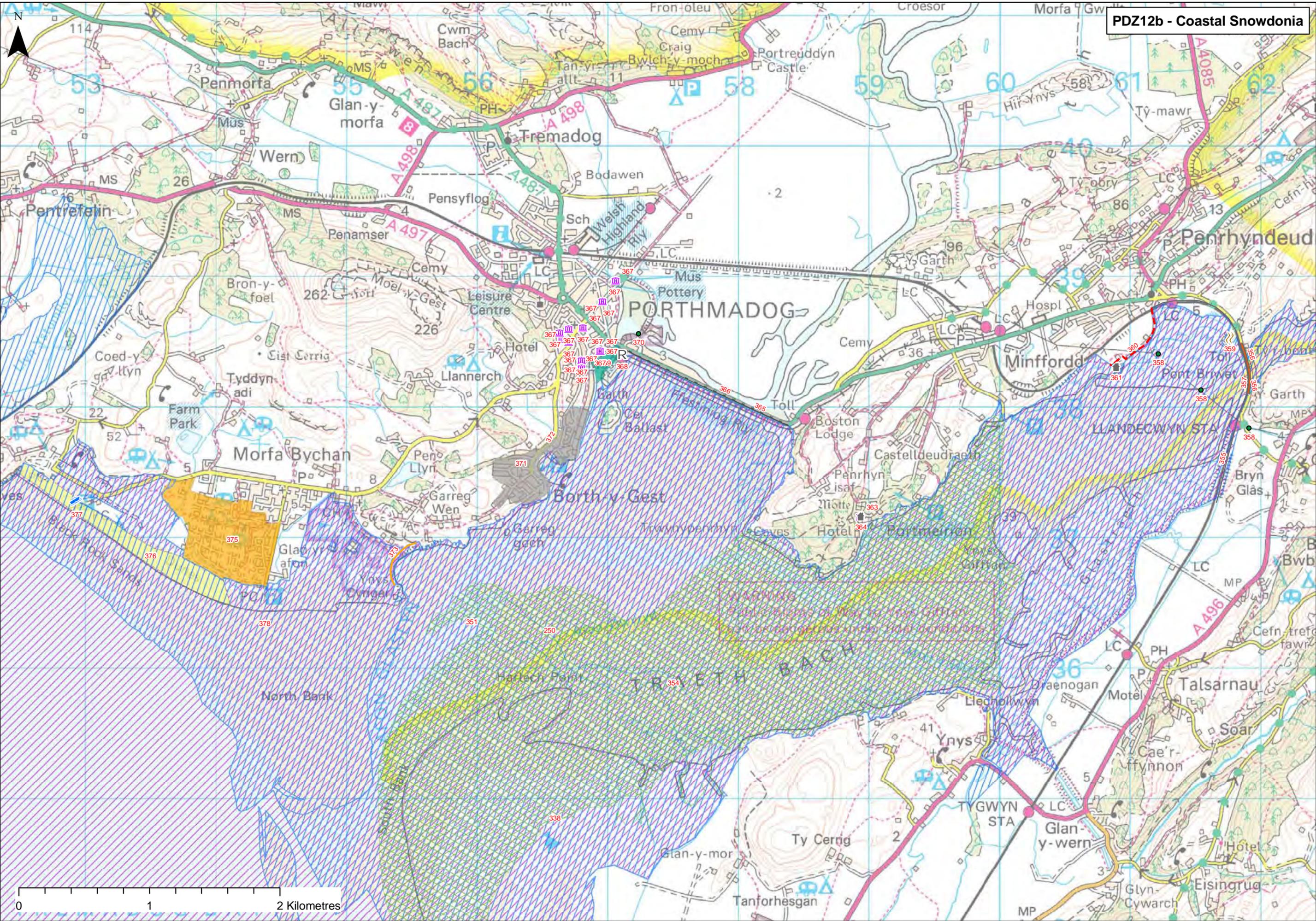
ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
339	F206	Llanbedr	Airbase/Airport	Royal Air Base	Protected by the dunes, however shoreline evolution shows the beach to be steepening due to high water advance and low water retreat with an estimated loss of beach width of around 30% over the last hundred years. Flooding may become a problem with SLR in the future.	Yes	Yes	Royal air base	National	HA	National Community	No	Yes	Maintain function of royal air base
340	F207	Shell Island	Caravan/Holiday Park/Camp Site	Camp sites	At Mocras Point the dunes stop and the frontage consists of cliffs and shingle beach, possible problems with SLR and coastal regression as the spit is artificially held in place to the north of Shell Island	Yes	Yes	Holidaymakers, recreation	National	R	National Community	No	Yes	Maintain function of camp sites
341	F208	Shell Island	Harbour / Marina	Harbour	Will possibly be lost due to SLR and the resultant loss of Shell Island	Yes	Yes	Holidaymakers, recreation	Regional	HA	Regional Community	No	Yes	Prevent loss of harbour and character of Shell Island
342	F209	Afon Artro	Coastal Road	Access road	Road appears to be built over the saltmarsh unlikely this will be sustained with SLR	Yes	Yes	Access road	Local	HA	Local Community	No	Yes	Prevent loss of access to shell island
343	F210	Afon Artro	Footpath	Footpath	Very close to edge of estuary, likely to be flooded due to SLR	Yes	Yes	Public right of way	Local	R	Local Community	No	Yes	Maintain public right of way
344	F211	Afon Artro	Railway	Pensarn Bridge	Railway line, possible impacts due to SLR	Yes	Yes	National rail network, transport links	National	HA	National Community	No	No	Prevent loss of railway line
345	F212	Afon Artro	Harbour / Marina	Pensarn Harbour	Harbour masters offices are located very close to the edge of the estuary, upon the mudflats almost. Likely to suffer problems with flooding due to SLR	Yes	Yes	Harbour masters offices, important for recreation	Regional	R	Regional Community	No	Yes	Maintain harbour of Pensarn
346	F213	Llandanwg	Harbour / Marina	Sailig club and breakwater	To the north east of Bar Newydd the entrance has been constricted by a breakwater linking to Llanbedr Sailing Club. Presumably, this structure was introduced to increase draft in the river basin nearby and within the outlet channel.	Yes	Yes	Used for recreation, the breakwater is important as a control for the entrance to the artro river	Regional	R	Regional Community	No	Yes	Maintain use of sailing club
347	F214	Llandanwg	Listed Building	St Tanwg Church	Small church within the dunes, likely to suffer loss due to coastal recession	Yes	Yes	Local church plus historic importance, possible buried structures associated with this church	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
348	F216	Llandanwg	Properties	Properties	Very close to shoreline, on a small cliff, seaward of the road, will be lost if shoreline recedes and also suffer flooding due to SLR	Yes	Yes	Dwellings, character of area	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
349	F217	Llandanwg	Railway	Railway line	From Llandanwg Point there is an extensive section of coastal works protecting the railway. The beach is formed largely of boulders and the shoreline is compressing incident tide and wave energy here. As a result, there is little sand and shingle evident	Yes	Yes	National rail network, transport links	National	HA	National Community	No	No	Maintain railway line
350	E032	Afon Artro	SAC, SSSI	Meirion Oakwoods and Bat Sites SAC, Coed Lletywalter SSSI	Risk of loss of habitats/species with flooding related to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (ecology / habitat)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
351	F218/E033	Harlech	SSSI	SSSI	Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
352	F219	Harlech	Railway	Railway line	Sea defences (rock armour) along railway line adjacent to property. If railway was closed and defences abandoned, erosion would accelerate and impinge on the property and footpath- high chance of property flooding	Yes	Yes	National rail network, transport links	National	HA	National Community	No	No	Maintain railway line
353	F220	Harlech	Footpath	Footpath	Footpath could be lost due to erosion if sea defences abandoned	Yes	Yes	Public right of way	Regional	R	Regional Community	No	Yes	maintain public right of way
2006	F219b	Harlech		Golf Course	Flooding of golf course, land drainage problems related to SLR and siltation of Dwyryd Estuary	Yes	Yes	Championship golf course, important to economy of Harlech	National	R	National Community	No	No	Maintain the operation of the Royal St David's Golf Course as a championship course through maintaining appropriate drainage and management of the shoreline
2007		Rhoscolyn	Beach	Sea Wall along northern section of beach	Sea wall intended to 'protect' the access road to lifeboat station is creating serious reflection of waves along the shoreline, eroding the dunes. The wall is potentially having adverse affects on the access road.	Yes	Yes	Access to lifeboat station and also shape of the bay	Local	I	Local Community	No	Yes	Maintain access to the lifeboat station, and not have adverse affects on dunes and beach



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PDZ12b Coastal Snowdonia - Traeth Dyffryn (North of Afon Ysgethin) to Pen y Chain

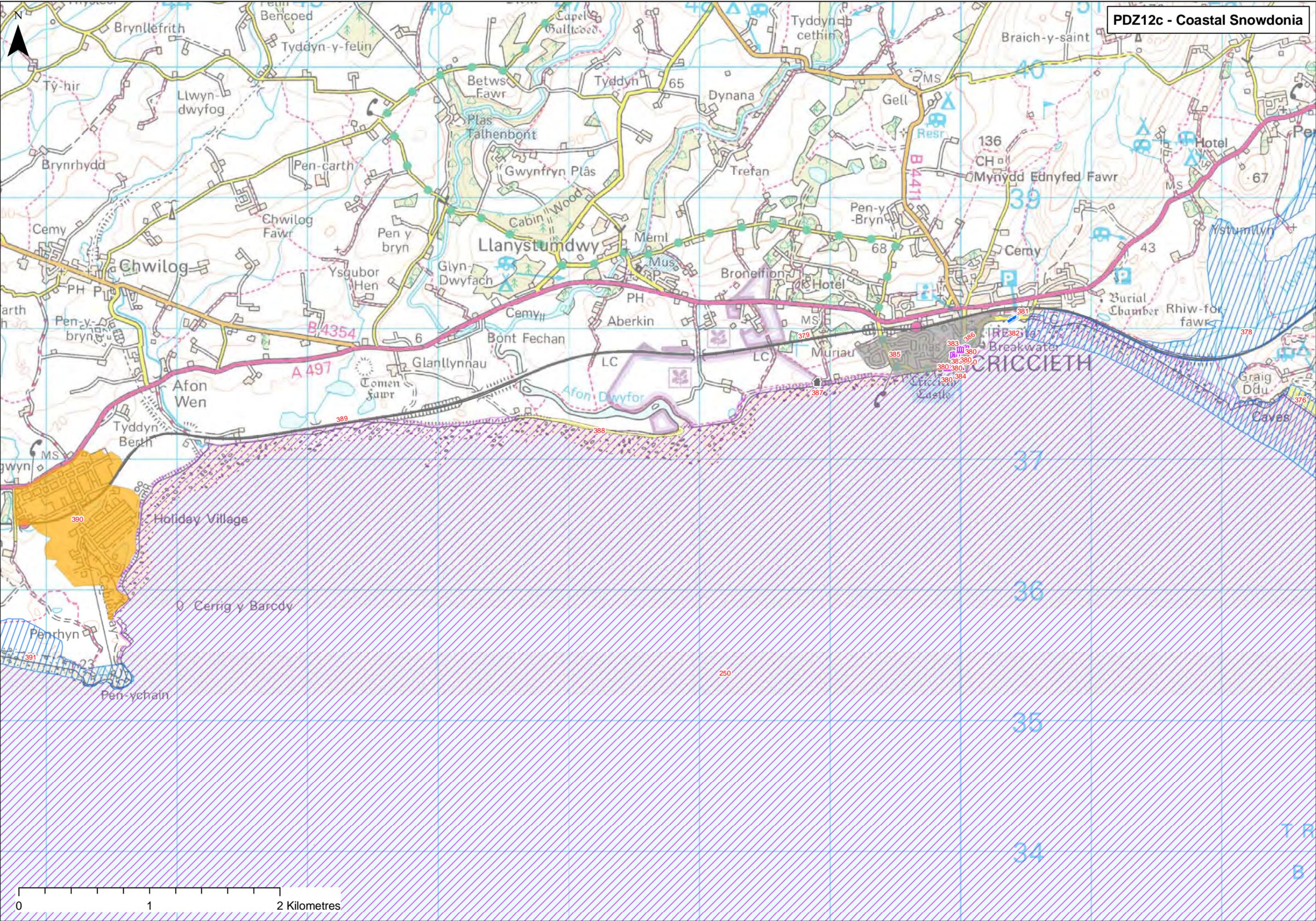
ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
354	E034	Morfa Harlech	National Nature Reserve	National Nature Reserve	Risk of loss of habitats/species with flooding related to SLR	Yes	Yes	National Nature Reserve	National	E	National Community	No	No	To maintain the conservation, amenity and educational benefits of the NNR
355	F221	Afon Dwyrdd	Railway	Railway line	Situated over the mudflats, likely to be lost if river levels rise due to SLR	Yes	Yes	National rail network, transport links, may also affect properties	National	HA	National Community	No	Yes	Maintain railway line
356	F222	Afon Dwyrdd	Railway	Bridge embankments	The estuary approach embankments to the railway bridge (Pont Briwet) have restricted the main channel migration and it is likely that this has resulted in development of the Glastraeth area of marsh	Yes	Yes	Marsh important for habitats, embankments important for bridge and controlling the channel	Regional	HA	Regional Community	No	No	prevent erosion/loss of embankments to ensure function of bridge
357	H075	Pont Briwet	Listed Building	Cadw LB bridge	Carrying the A4085 and railway over the Dwyrdd river, if affected by SLR, will consequently affect the bridge and the main road and railway	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
358	F223	Afon Dwyrdd		Pylon	Located right on edge of river, if levels rise, may be at risk	Yes	Yes	National power network	Regional	HA	Regional Community	No	Yes	Ensure pylon is maintained at a safe level
359	F224	Afon Dwyrdd	Sewage Works	Sewage works	Located close to edge of river, if levels rise, may be at risk	Yes	Yes	Sewage treatment for area	Local	HA	Local Community	No	Yes	Maintain sewage works
360	F225	Afon Dwyrdd	Footpath	Footpath	Close to mudflats, possibly lost if levels rise	Yes	Yes	Public right of way	Regional	R	Regional Community	No	Yes	maintain public right of way
361	F226	Afon Dwyrdd	Properties	Properties	Some properties appear to be sat next to, almost within the mudflat/saltmarsh area, at risk of flooding of levels rise	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to SLR
362	E035	Afon Dwyrdd	SAC, SSSI	Meirionnydd Oakwood and Bat Sites SAC, Coedydd Dyffryn Ffestiniog SSSI	Located along the river, at risk of loss with SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology / habitat)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
363	H076	Portmeirion	Listed Building	Many cadw listed buildings and Portmeirion Historic Park	Situated on the edge of the Dwyrdd river, this town contains many historically important features, may suffer some loss with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
364	F227	Portmeirion	Properties	Properties	Although located on a steep hill, possible changes of flooding to lower lying properties due to SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to SLR
365	H077	Afon Dwyrdd and Afon Glaslyn	Properties	The Cob is an embankment, carrying the railway line across the estuary	Will suffer loss with SLR	Yes	Yes	Railway line	Regional	HA	Regional Community	No	Yes	Prevent loss of railway line
366	F228	Portmeirion	Coastal Road	Road and railway line	situated over the mudflats on an embankment, likely to be lost if river levels rise due to SLR	Yes	Yes	Transport links, rail network	National	HA	National Community	No	Yes	Maintain road and railway line
367	H078	Porthmadog	Listed Building	Many cadw listed buildings	Located close to river glaslyn, this town may suffer some loss of historically important buildings due to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
368	F229	Porthmadog	Railway	Railway station	Located on a sand bar, defended, however low lying, may be at risk due to SLR	Yes	Yes	Railway station	National	HA	National Community	No	Yes	Prevent loss of railway station
369	F230	Porthmadog	Harbour / Marina	Porthmadog harbour and slipway	Defended with hard structures, quay walls etc, but likely to experience flooding with SLR	Yes	Yes	Popular town, recreation	National	HA	National Community	No	No	Maintain use of harbour
370	F231	Porthmadog		Tidal Sluice	Low lying sluice behind sand bar, will be lost if water levels rise	Yes	Yes	control the tide entering the estuary	Local	I	Local Community	No	Yes	Maintain function of tidal sluice
371	F232	Borth y gest	Properties	Properties	Situated along the rocky shoreline, at risk of loss due to erosion/coastal recession	Yes	Yes	Dwellings, character of town, popular tourist destination	Regional	HA	Regional Community	No	No	Prevent loss of properties due to SLR
372	F233	Borth y gest	Coastal Road	Coastal road	Skirts the edge of the estuary, at risk of loss due to recession	Yes	Yes	Access, transport link	Regional	HA	Regional Community	No	No	Maintain access
373	F234	Borth y gest	Beach	Borth y Gest Beach	In the seventies this small sandy bay experienced erosion due to migration of the Afon Dwyrdd and this rock revetment was put in place along the back shore for protection. If removed bay may erode due to erosion	Yes	Yes	Recreation	Local	R	Local Community	No	No	Maintain function of beach
374	F235/E036	Morfa Bychan	SAC, SSSI	Lleyn Peninsular SAC, Dunes, Tiroedd a glannau rhwng cricieth ac afon glaslyn SSSI	Risk of loss of habitat with SLR and coastal recession. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national nature conservation interest - Geological, botanical and marine biological features	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
376	F237	Black rock sands	Beach	Beach	narrow beach, at risk of being lost due to SLR	Yes	No	Recreation	Local	R	Local Community	No	No	Maintain function of beach
377	F238	Black rock sands	Slipway and Access	Access road and slipway	Risk of eroding due to coastal recession	Yes	Yes	Access on to beach for beachgoers, popular recreational area	Regional	R	Regional Community	No	Yes	Maintain access to beach



PDZ12c Coastal Snowdonia - Traeth Dyffryn (North of Afon Ysgethin) to Pen y Chain

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
378	E037	Criccieth	SSSI	Glanlynnau a glannau pen y chain I griccieth SSSI	Along the shoreline, may suffer loss with future SLR. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	National nature conservation interest - Geological, botanical and marine biological features	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
379	F239	Criccieth	Railway	Railway line	lies close to shore, although this section of coastline appears to be in equilibrium, it may suffer issues in the future with coastal recession and SLR	Yes	Yes	National rail network, transport links	National	HA	National Community	No	Yes	Maintain railway line
380	H079	Criccieth	Listed Building	Cadw listed building, Morannedd Café	Situated at the end of the esplanade, seaward of the railway line, may be lost with coastal recession	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting
381	F240	Criccieth	Car Park	Car park	Protected by groynes which act to hold a substantial amount of shingle against the seawall, at risk of failure/loss with SLR	Yes	Yes	Parking facilities for criccieth and promenade	Regional	HA	Regional Community	No	Yes	Maintain car parking facilities
382	F241	Criccieth	Slipway and Access	Esplanade slipway and road	Very close to shore protrude outside of natural shape of beach, at risk of being lost to coastal recession	Yes	Yes	Access	Regional	R	Regional Community	No	Yes	Maintain access
383	F242	Criccieth	Properties	Properties on cliffside	Located on the beach on the edge of a cliff, the cliff is protected with a large cribwork retaining wall, if cliff recedes houses will be lost	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of property due to cliff erosion
384	H080	Criccieth	SAM	Criccieth Castle SAM	Situated on a rocky headland, may suffer loss of land/castle with coastal erosion in the future	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and its setting
385	F243	Criccieth	Properties	Properties to the west of Criccieth	Behind the promenade, properties appear to be in lower lying land slightly, at risk of flooding and loss due to SLR	Yes	Yes	Criccieth is a popular place to visit due to castle, important to maintain its character	Regional	HA	Regional Community	No	No	Prevent loss of property due to SLR
386	F244	Criccieth	Coastal Road	Road and promenade	On a sea wall, at risk of being lost to coastal recession	Yes	Yes	Access to criccieth and coastal road	Regional	HA	Regional Community	No	No	Maintain access
387	F245	Criccieth	Properties	Properties to the west, toward Penychain	Sat on eroding cliffs, are at risk of eroding, as is the footpath	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of property due to coastal erosion
388	F246	Criccieth Beach (East of town)	Beach	Beach	If spit breaches/lost to SLR, will impact the sediment supply and dynamics to the east of the river along the coast	Yes	Yes	Beach important for recreation and for sediment dynamics	Local	R	Local Community	No	No	maintain and monitor spit to prevent adverse impacts eastwards
389	F247	Penychain to criccieth	Railway	Railway line	Located behind shingle ridge, however, very close to shore, at risk of erosion	Yes	Yes	National rail network	National	HA	National Community	No	Yes	Prevent loss of railway line
390	F248	Penychain	Caravan/Holiday Park/Camp Site	Holiday park	Situated close to shore, protected somewhat by penychain headland/outcrop, low lying at risk of flooding due to SLR	Yes	Yes	Tourism	Regional	R	Regional Community	No	Yes	Maintain function of holiday park

Yes

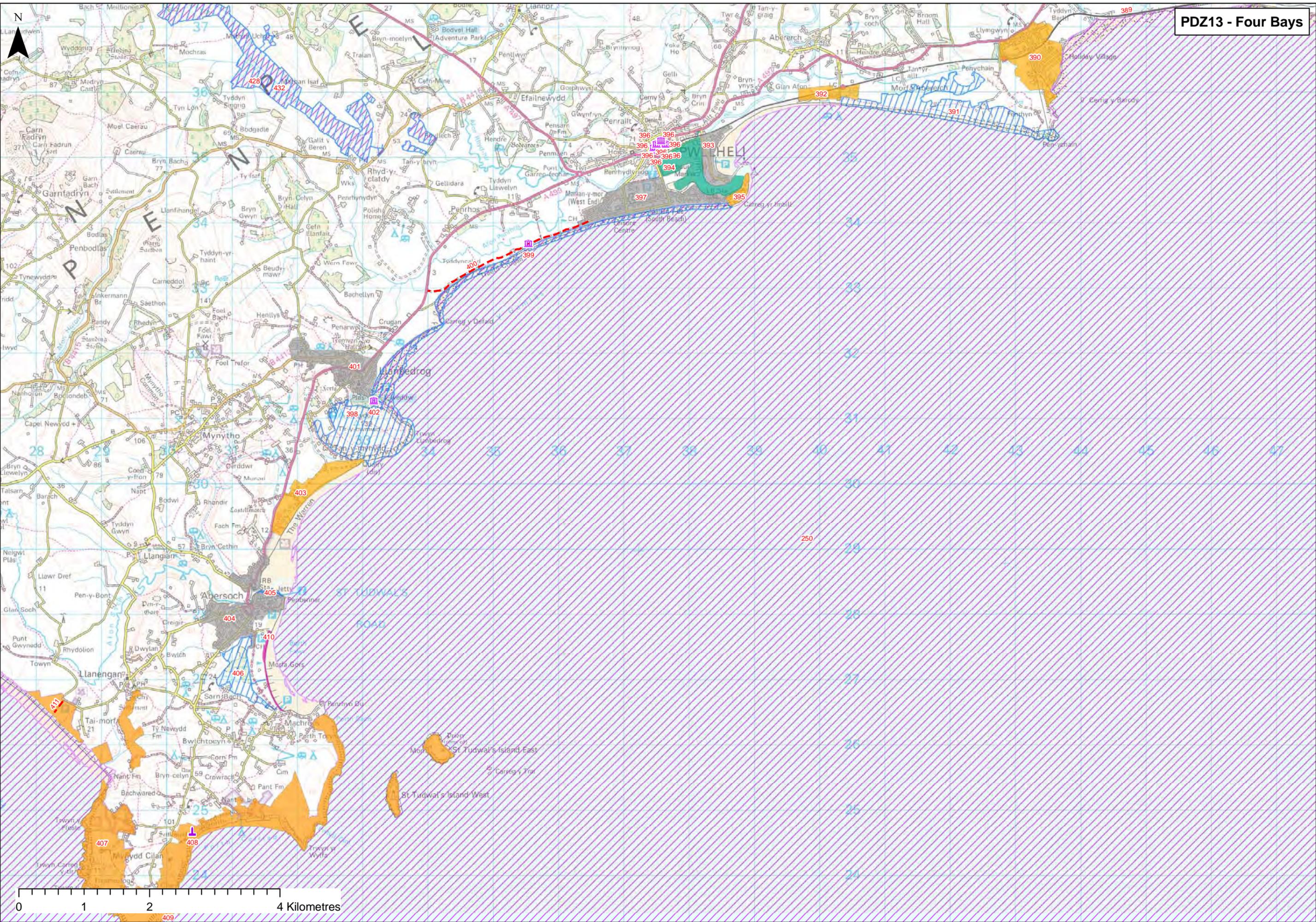


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PDZ13 Four Bays - Pen y Chain to Trwyn Cilan

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
391	F249/E038	Penychain	SSSI	Morfa Aberech SSSI	Along the shoreline, may experience issues with coastal recession and SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest - Ecology / habitat including lowland heathland including dune heath, dry heath, maritime heath, wet heath and scrub	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
392	F250	Abererch	Caravan/Holiday Park/Camp Site	Sands holiday park	Close to coast, seaward of the railway line, within a dune system, at risk of loss due to coastal recession	Yes	Yes	Tourism	Regional	R	Regional Community	No	Yes	Maintain function of holidaypark
393	F251	Glan y don	Properties	Properties behind beach	Properties may be at risk in the future. Artificially shaped by reclamation behind the north training bank. The uniform curve of the bay is disrupted at this point with the beach tending to be in advance of the general line.	Yes	Yes	Dwellings	Regional	HA	Regional Community	No	No	Prevent loss of property due to coastal erosion
394	F252	Pwllheli	Harbour / Marina	Marina/ Harbour	Busy harbour at risk of being lost to SLR	Yes	Yes	Recreation	Regional	R	Regional Community	No	No	Maintain harbour for recreation and for the character of town
395	F253	Pwllheli	Caravan/Holiday Park/Camp Site	Carreg yr Imbill Holiday park	Located on the updrift headland of the crenulate bay, southern entrance to Afon Erch, is at risk if levels rise	Yes	Yes	Tourism	Regional	R	Regional Community	No	Yes	Maintain function of holidaypark
396	H081	Pwllheli	Listed Building	Various Cadw Listed buildings	Situate in the harbour of pwllheli, these properties are likely to have flooding issues with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
397	F254	Pwllheli	Properties	Frontage settlement and Agricultural Land within the valley of the Afon Penrhos	Located behind dunes, however, in some places, road, promenade and properties are within and forward of the dunes, likely to be lost with coastal recession	Yes	Yes	Properties	Regional	HA	Regional Community	No	No	Prevent loss of property due to coastal erosion
397		Pwllheli	Coastal Road	A449 Coastal Road	At risk from flooding	Yes	Yes	Main road from Pwllheli to Abersoch	Regional	HA	Regional Community	No	Yes	To maintain access between Pwllheli and Abersoch
398	E039	Pwllheli	SSSI	Mynydd tir y cwmwd a'r glannau at garreg yr imbill SSSI	A narrow strip of SSSI, likely to be lost with coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest - Geological, botanical and marine biological features	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
399	H082	Tan y Bwlch	Listed Building	Cadw listed building	This property is located slightly behind the dunes, may suffer loss with coastal recession	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
400	F255	Treath Crugan	Footpath	Footpath	Sits just behind shingle beach, likely to be lost with recession	Yes	Yes	Public right of way	Regional	R	Regional Community	No	Yes	Maintain public right of way
401	F256	Llanbedrog	Properties	Coastal properties	Likely to be lost with recession of shoreline	Yes	Yes	Properties	Regional	HA	Regional Community	No	No	Prevent loss of property due to coastal erosion
402	H083	Llanbedrog	Listed Building	Foxhole' Cadw listed building	To the south of Llanbedrog beach this property may be lost with coastal recession	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
403.00	F257	Abersoch to Llanbedrog	Caravan/Holiday Park/Camp Site	Holiday park	Very large holiday par located on the edge of the dunes, highly likely to have future flooding/erosion problems	Yes	Yes	Tourism	Regional	R	Regional Community	No	Yes	Maintain function of holidaypark
404.00	F258	Abersoch	Properties	Settlement	Not particularly low lying, however may be at risk due to coastal recession	Yes	Yes	Settlement, popular recreational town	Regional	HA	Regional Community	No	No	Prevent loss of property due to coastal erosion
405.00	E040	Abersoch	SSSI	Pen Benar SSSI	Narrow SSSI along the northern face of the Pen Benar spit	Yes	Yes	National nature conservation interest - Geology associated with Tremadoc Series rocks	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
406.00	F259/E041	Abersoch	SSSI	Cors Llyferin SSSI	Located behind morfa Gors, not immediately coastal, but may experience flooding in the future	Yes	Yes	National nature conservation interest - Botanical interest, in particular for the wetland vegetation	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
407.00	E042	Lley	SPA, SAC, SSSI	Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal SPA and Seaciffs of Lley SAC, Porth ceriad, Porth neigwl ac ynysoedd sant tudwals SSSI	All located around this large peninsular, risk of some loss with coastal recession/SLR. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national nature conservation interest - Geological/geomorphological, ornithological, botanical, entomological and marine features	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
410.00	F260	Porth Fawr	Slipway and Access	Beachhouses , slipways and car park	Popular recreational beach, at risk of loss due to erosion	Yes	Yes	Tourism	Regional	R	Regional Community	No	No	Maintain use of beachhouses and access to the beach

PDZ13 - Four Bays



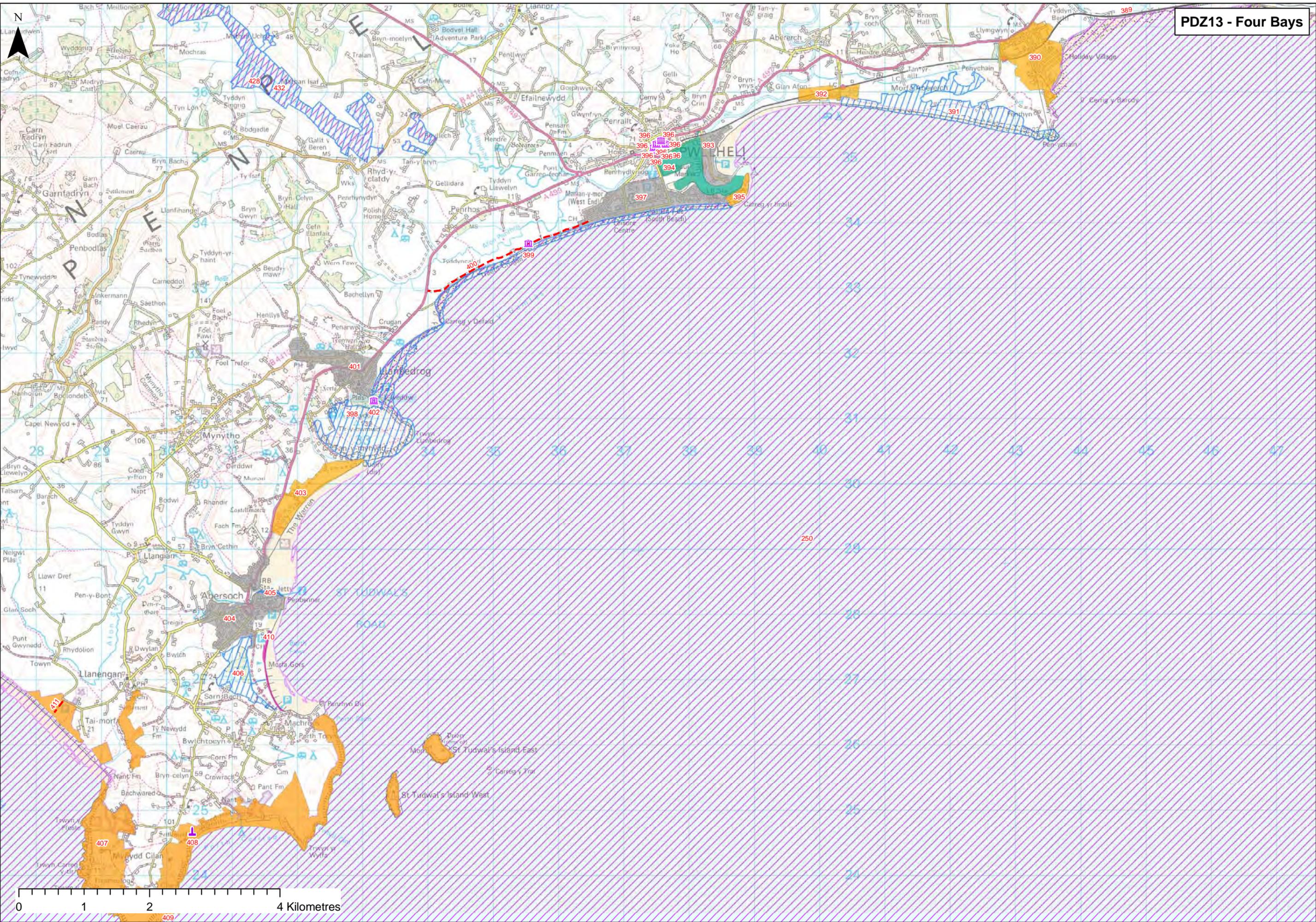
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PDZ14a Lleyn West - Trwyn Cilan to Porth Dinllan

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
408	H084	Porth Ceiriad	SAM	Pared Mawr Camp SAM	On a hill, to the west of Porth Ceiriad beach, may be lost as shoreline recedes	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
409	H085	Trwyn Llech y Doll	SAM	Burial Chamber SAM	On a headland, to the west of Porth Ceiriad beach, may be lost as cliff erodes	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
411	F261	Hells Mouth	Footpath	Footpath, access	Popular beach for surfing, access required, retreating cliffs may impede on access and car parking	Yes	Yes	Recreation and Tourism	Regional	R	Regional Community	No	Yes	Maintain access to beach
412	H086	Hells Mouth	Listed Building	Listed Buildings and Historic park to the west of Porth Neigwl	Although located on a hill, there may be some loss with coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
413	E043	Mynydd Penarfynydd	SSSI	SSSI	Located on top and along the seacliffs SAC, risk of loss with recession. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	National nature conservation interest (ecology/habitat and geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
414	E044	Porth Alwrn	SSSI	Wig Bach a'r glannau I borth alwrn SSSI	Narrow SSSI on the eastern side of aberdaron bay, at risk of loss with SLR. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	National nature conservation interest - Geological and marine biological features, in particular for its rockpool, bedrock overhang and surge gully communities	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
415	F262	Aberdaron	Properties	St Hywyns church	Parish Church, the main issue are the graves, large retaining wall was constructed to prevent loss of the churchyard, at risk due to recession of the shoreline, cliffs to the east are eroding, evidence of the church being set further seaward than the natural shoreline	Yes	Yes	Graves/churchyard	Regional	HA	Regional Community	No	No	Prevent loss of parish church and graves
416	H087	Aberdaron	Listed Building	Cadw listed buildings of aberdaron	Situated behind the beach, may suffer as the coast recedes	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
417	F263	Aberdaron	Properties	Properties	Although protected by flood gate at the slipway, at risk of loss due to recession and SLR in the future	Yes	Yes	Settlement, popular recreational town	Regional	HA	Regional Community	No	No	Prevent loss of property due to coastal erosion
418	F264	Porth Meudwy	Slipway and Access	Slipway	Located in a small bay, in a low lying valley, at risk of being lost to SLR	Yes	Yes	Access to Aberdaron Bay	Local	R	Local Community	No	Yes	Maintain function of slipway
419	F265/E045	Aberdaron Bay	SPA, SAC, SSSI	Glannau aberdaron and Ynys Enlli and Bardsey Island SPA, Seacliffs of Lleyn and Lleyn Peninsular and the Sarnau SACs, Glannau Aberdaron SSSI	Risk of loss of habitat and designations due to SLR. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national - Botanical, ornithological and geological	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
420	H090	BardseySound	SAM	St Marys Church SAM	Although located on a headland, there may be some loss with coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
421	F266	Porth Oer	Slipway and Access	Car park and beach access	In a small sandy bay, located on fairly high ground although at risk of being lost to coastal recession	Yes	Yes	Popular for surfing	Regional	R	Regional Community	No	Yes	Maintain access to beach
422	F267	Porth Iago	Slipway and Access	Car Park and beach access	In a small sandy bay, located on fairly high ground although at risk of being lost to coastal recession	Yes	Yes	popular for surfing	Regional	R	Regional Community	No	Yes	Maintain access to beach
423	H091	Porth Ferin	Listed Building	Cadw listed building 'Penyborth'	May be lost with coastal recession	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting

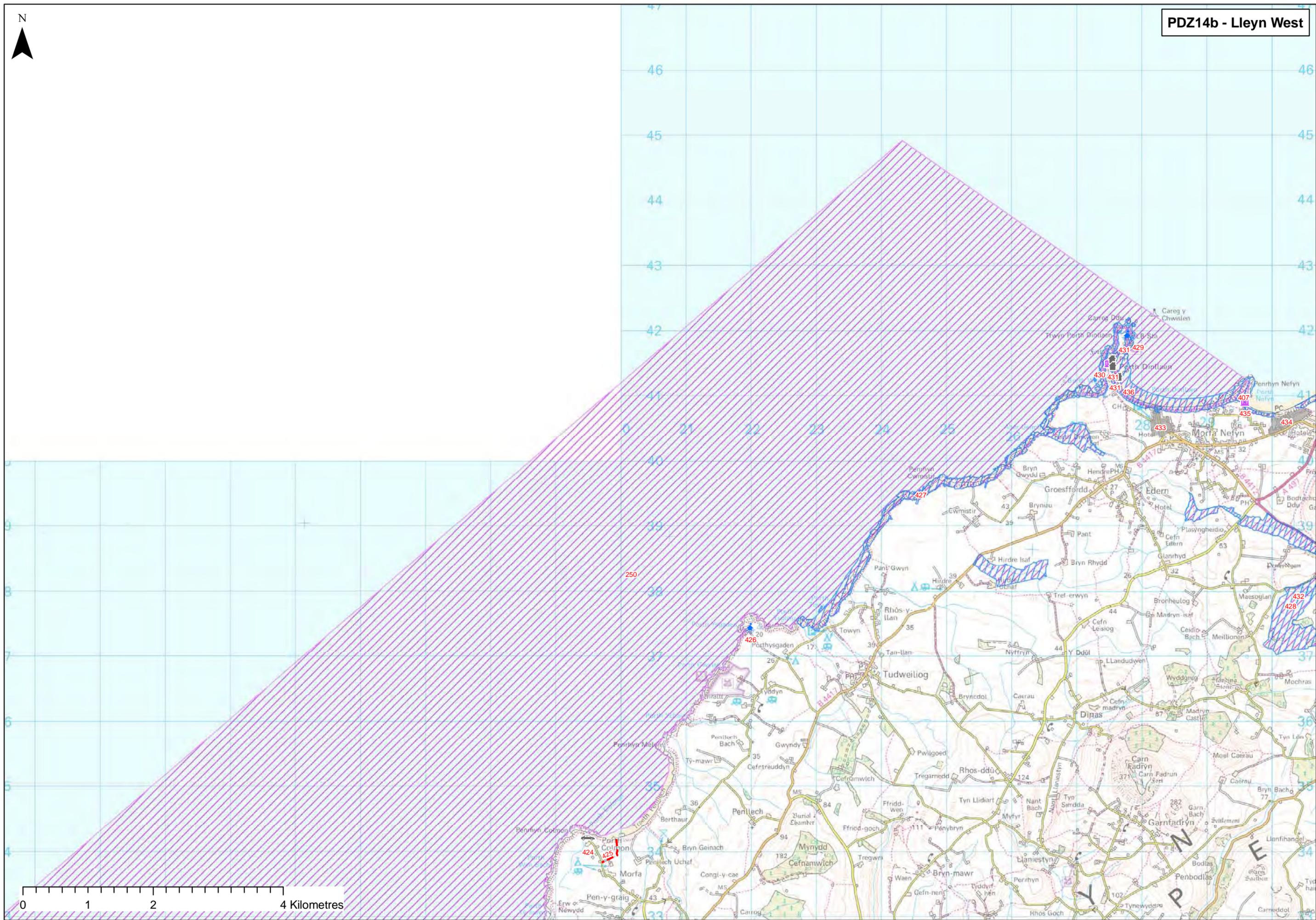
Yes

PDZ13 - Four Bays



PDZ14b Lleyn West - Trwyn Cilan to Porth Dinllaen

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
424.00	F268	Porth Colman	Car Park	Car park and road	Located close to shore, maybe lost due to recession of coastline	Yes	Yes	Access to beach, popular bathing spot	Local	HA	Local Community	No	Yes	Maintain parking facilities for visitors
425.00	F269	Treath Penllech	Footpath	Footpath	llikely to need relocating with the receding coastline	Yes	Yes	Access to beach for scuba diving	Local	R	Local Community	No	Yes	Maintain access to beach
426	H092	Porth Ysgaden	Lifeboat/ Lifeguard Station	Lime Kiln cadw listed building	Situated very close to the sea built into and near the top of a cliff, may be lost as cliff recedes	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
427.00	E046	Porth Towyn	SSSI	Porth Towyn I borth wen SSSI	Along the coastline, may suffer some loss as sea levels rise. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	National nature conservation interest - Marine biological importance for its diverse coralline rockpool communities, the presence of a cave community of restricted national distribution and for exhibiting complete zonation of rocky shore communities	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
428.00	E047	Aber Geirch	SAC, SSSI	Corsydd Llyn SAC, Aber Geirch SSSI	Not within the coastal zone, but may be impacted with water levels rising	Yes	No	International and national - Ecology / habitat including fens	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
429.00	F270	Porth Dinllaen	Lifeboat/ Lifeguard Station	RNLI station	Lifeboat station and slipway very close to shore, access is through the golf course, restricted.	Yes	Yes	Reuquired for rescue for recreational users, quite a popular spot for surfing, boating, swimming, so it's a necessity that this lifeboat station remains in use,may need relocating in the future	Regional	HA	Regional Community	No	Yes	Maintain function of lifeboat station
430	H093	Porth Dinllaen	Listed Building	Cadw listed Building 'White Hall'	Located on the beach, will be lost to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
431.00	F271	Porth Dinllaen	Properties	Properties	Quaint village situated at the base of an eroding cliff very close to the shore, it is unlikely this will still exist in the future due to SLR	Yes	Yes	Dwellings. Access is required for residents only, through golf club, not a tourists spot. Beach used for small fishing and recreation	Local	HA	Local Community	No	No	Prevent loss of properties and character of town due to SLR
432.00	F272/E048	Porth Dinllaen	SAC, SSSI	Seacliffs of Lleyn and Lleyn Peninsular SACs, Porth dinllaen I Borth Pistyll SSSI	Coastal designations, may suffer some loss in the future. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	International and national - Ecology / habitat and geology	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
433.00	F273	Morfa Nefyn	Properties	Properties	Very close to shore, some are sat on a sea wall seawards of eroding soft clay cliffs, however with SLR and coastal recession it is unlikely these will be here in the future	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties and character of town due to SLR
434.00	F274	Nefyn	Properties	Properties	Very close to shore, some are sat seawards of eroding soft clay cliffs others ontop of cliffs, however with SLR and coastal recession it is unlikely these will be here in the future with out defending	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties and character of town due to SLR
435	H094	Porth Nefyn	Listed Building	Cadw listed building 'Hendafarn'	Located on the beach, will be lost to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting



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PDZ15 North Bays - Porth Dinllaen to Trwyn Maen Dylan

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
436	E050	Yr Eifl	SSSI	Yr Eifl SSSI	Large hill on the coastline, SSSI stretches down to the shoreline, likely to be impacted by coastal erosion	Yes	Yes	National nature conservation interest (ecology - heathland and geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
437	F275	Porth Y Nant	Historical	Disused quarry	Close to the receding shoreline, likely to be lost due to coastal recession	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
438	E051	Trefor	SSSI	Gwydir Bay SSSI	Along the coastline, this SSSI may be impacted by shoreline recession/SLR	Yes	Yes	National nature conservation interest (habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
439	F276	Trefor	Pier	Pier	Likely to be lost as its not used for quarry anymore, not maintained as much, mayb be lost due to SLR	yes	no	used for anglers		R				
440	F277	Trefor	Car Park	Access road and car park	Close to edge of shingle beach, may be lost due to SLR	Yes	Yes	Access required. Popular beach used for recreation, fishing, surfing	Regional	HA	Regional Community	No	Yes	Maintain access to beach
441	F278	Gym Goch	Caravan/Holiday Park/Camp Site	Campsite and caravan park	Close to edge of shingle beach, may be lost due to SLR	Yes	Yes	Tourism and Recreation	Local	R	Local Community	No	Yes	Maintain function of caravan and camping park
442	H095	Clynnog Fawr	Historical	Bachwen Burial Chamber	Sits about 100m from edge of the shore. May have flooding issues, low lying land but is quite far inland	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
443	F279	Aberdesach	Properties	Village properties	Low lying coastal village properties are close to edge of shingle beach, may be lost due to SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
444	F280	Aberdesach	Car Park	Car park	Again, close to shore, will be lost with recedding coastline	Yes	Yes	Used for walkers, visitors to area, recreational beach users	Local	R	Local Community	No	Yes	Maintain function of car park
445	F280	Aberdesach	Car Park	Car park	Again, close to shore, will be lost with recedding coastline	Yes	Yes	Used for walkers, visitors to area, recreational beach users	Local	R	Local Community	No	Yes	Maintain function of car park
446	F281	Pontllyfni	Beach	Beach houses	At risk of being lost to coastal recession in the future	Yes	Yes	Tourism	Local	R	Local Community	No	Yes	Maintain use of beach houses

Yes



PDZ15 - North Bays

B A E C A E R N A R F O N



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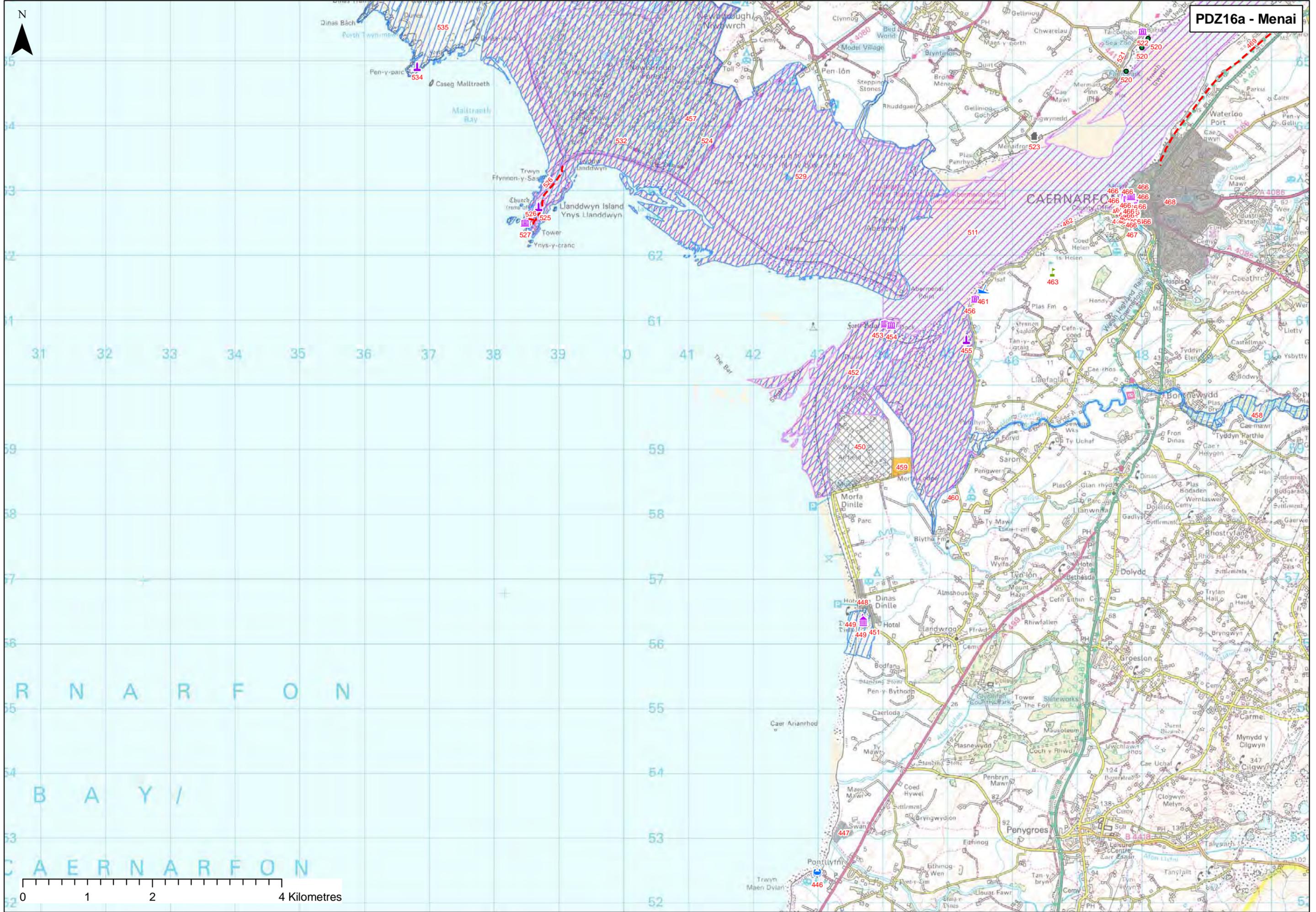
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PDZ16a Menai - Trwyn Maen Dylan to Gerizim and Twyn y Parc to Penmon Point

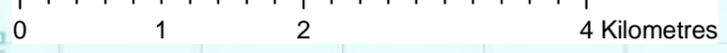
ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
447	F282	Pontllyfni	Properties	Trout Farm	Low lying and close to the shore, may become flooded with SLR or be lost to coastal recession	Yes	Yes	Used for rainbow trout farming	Regional	C	Regional Community	No	Yes	Maintain function of trout farm
448	F283	Dinas Dinlle	Properties	Properties, coastal road	Seawater inundation of properties and there is concern about NT and LA owned sea defences. Beach levels have been improved following a storm in 1990, and movement has been controlled by two rock shore connected rock structures. This town is low lying howe	Yes	Yes	Dwellings and access road	Local	HA	Local Community	No	No	Maintian access and protect property
449	F284/E052	Dinas Dinlle	SAM	Scheduled Ancient Monument and SSSI	SAM Iron Age romano-british hillfort; WW2 pill box in the CRZ-erosion uncovering archaeology	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting and to prevent disturbance to or reduction of the area of the interest features, and ensure policy to enable adaptive response to sea level rise and erosion.
450	F285	Caernarfon Airfield	Airbase/Airport	Airfield	Located to the south of the Morfa Dinlle Dunes, subject to being at risk of erosion/ flooding with SLR	Yes	Yes	Airfield	Regional	HA	Regional Community	No	Yes	Maintain function of airfield
451	H096	Dinas Dinlle	Historical	Dinas Dinlle Camp, Promontory fort and seagull trench	Situated very close to the coast, may have some land loss with SLR/ coastal recession	Yes	Yes	Archaeological Importance	Local	H	Local Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
452	F286/E053	Morfa Dinlle	SAC, SSSI	SSSI and Abermenai to Aberffraw Dunes SAC	SSSI loss on site- notable inverts on soft cliffs. Changes to natural processes	Yes	Yes	International and national nature conservation interest (ecology/habitat, dune geomorphology)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
453	F287	Morfa Dinlle	Listed Building	Fort Belan LB	Privately owned property, close to the shore located on the entrance to the menai straits	Yes	Yes	private dwelling, also holds archeological importance	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
454	H097	Fort Belan	Listed Building	Cadw listed building Fort Beland and dock (including dockside buildings)	Situate on the tip of the Morfa Dinlle, if dynamics of the estuary are altered, it will affect this feature, its fairly low lying, so will be impacted by SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
455	H098	Afon Gwyrfa	SAM	Cored Gwyrfa Fish Weir SAM	situated on the mudflats of the river, will have issues with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
456	H099	Menai Straits	Listed Building	Llanfaglan Lime Kiln Listed Building	ON the landward side of the coastal road, may have future issues as sea levels rise	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
457	E054	Foryd Bay	SAC, SSSI	Menai Strait and Conwy Bay SAC, Y Foryd SSSI	Within the bay this designation lies on mudflats, likely to be impacted by SLR	Yes	Yes	International and national nature conservation interest (ecology/habitat)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
458	E055	Afon Gwyrfa	SSSI	Afon Gwyrfa a Llyn Cwellyn SSSI	Although not in the coastal zone, this river may suffer impacts as a result of water levels rising in the straits	Yes	Yes	National nature conservation interest (ecology/habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
459	F288	Morfa Dinlle	Caravan/Holiday Park/Camp Site	Morfa Lodge and caravan site	Located seaward of the mudflats south of Afon Gwyrfa, at risk of flooding if river migrates levels rise	Yes	Yes	Tourism	Local	R	Local Community	No	Yes	Maintain function of caravan and camping
460	F289	Afon Gwyrfa	Properties	Properties	Low lying, on edge of river, at risk of loss due to flooding	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	To prevent the loss of properties due to flooding
461	F290	Menai Straits	Boating / Shipyards	Small boat yard and car park	Located just above MHW mark, likley to have issues in future due to SLR	Yes	Yes	Storage for boats for recreational users	Local	HA	Local Community	No	Yes	Maintain boat storage and car park
462	F291	Menai Straits	Coastal Road	Coastal Road	Located just above MHW mark, likley to have issues in future due to SLR	Yes	Yes	Access road to Ynys Mon	Regional	HA	Regional Community	No	Yes	Maintain access
463	F292	Caernarfon	Golf Course	Golf Course	Low lying, at risk of flooding with future SLR	Yes	Yes	Recreation	Regional	R	Regional Community	No	Yes	Maintain golfing facilities
464	F293	Caernarfon	Footpath	Foot bridge	Low lying, at risk of being lost with SLR	Yes	Yes	Access to castle and town over the river	Local	HA	Local Community	No	Yes	Maintain access
465	F294	Caernarfon	Car Park	Car park	Located on a quay wall, may have issues in the future with SLR	Yes	Yes	Important for visitors to Castle and town	Regional	HA	Regional Community	No	Yes	Maintain parking facilities
466	H100	Caernarfon	Listed Building	Cadw listed buildings, Essential Settings, Castle and Town Walls	All historically important features, may suffer some flooding with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting
467	F295	Caernarfon	Harbour / Marina	Quay	On the southern side of the river, at risk of flooding if water levels rise	Yes	Yes	Recreation, popular boating area	Regional	R	Regional Community	No	Yes	Maintain function of quay
468	F296	Caernarfon	Properties	Properties	Residential properties on edge of menai straits, at risk in the future due to SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of property due to SLR
523	F409	Menai Straits	Properties	Coastal farms and properties	Situated along th banks of the straits, likely to suffer loss of land/properties due to erosion or SLR	Yes	Yes	Agricultural land/ properties	Local	HA	Local Community	No	Yes	Prevent loss of properties and land due to SLR
524	F408	Traeth Abermenai	SSSI	SSSI	At risk of loss of some SSSI due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
525	H168	Llanddwyn Island	SAM	St Dwynwens Church SAM	situated in the centre of the island, acces to this SAM may deem a problem with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
526	F407	Llanddwyn Island	Footpath	Footpath	Path at rsk of being lost when sea levels rise	Yes	Yes	Island is only accessible via footpath	Local	R	Local Community	No	No	Maintain access
527	H167	Llanddwyn Island	Listed Building	Former lighthouse keepers and pilots properties, lighthouse and tower LBs	Situated on the seaward edge of the island, these properties are likely to be lost with erosion of the cliffs and SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
528	F406	Anglesey coast dunes	cSAC SSSI	cSAC, SSSI	At risk of loss of some SSSI due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest - One of the largest dune systems in Wales	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
529	F405	Newborough Forest	SSSI	SSSI and NNR	At risk of loss of some SSSI due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology / habitat and geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system



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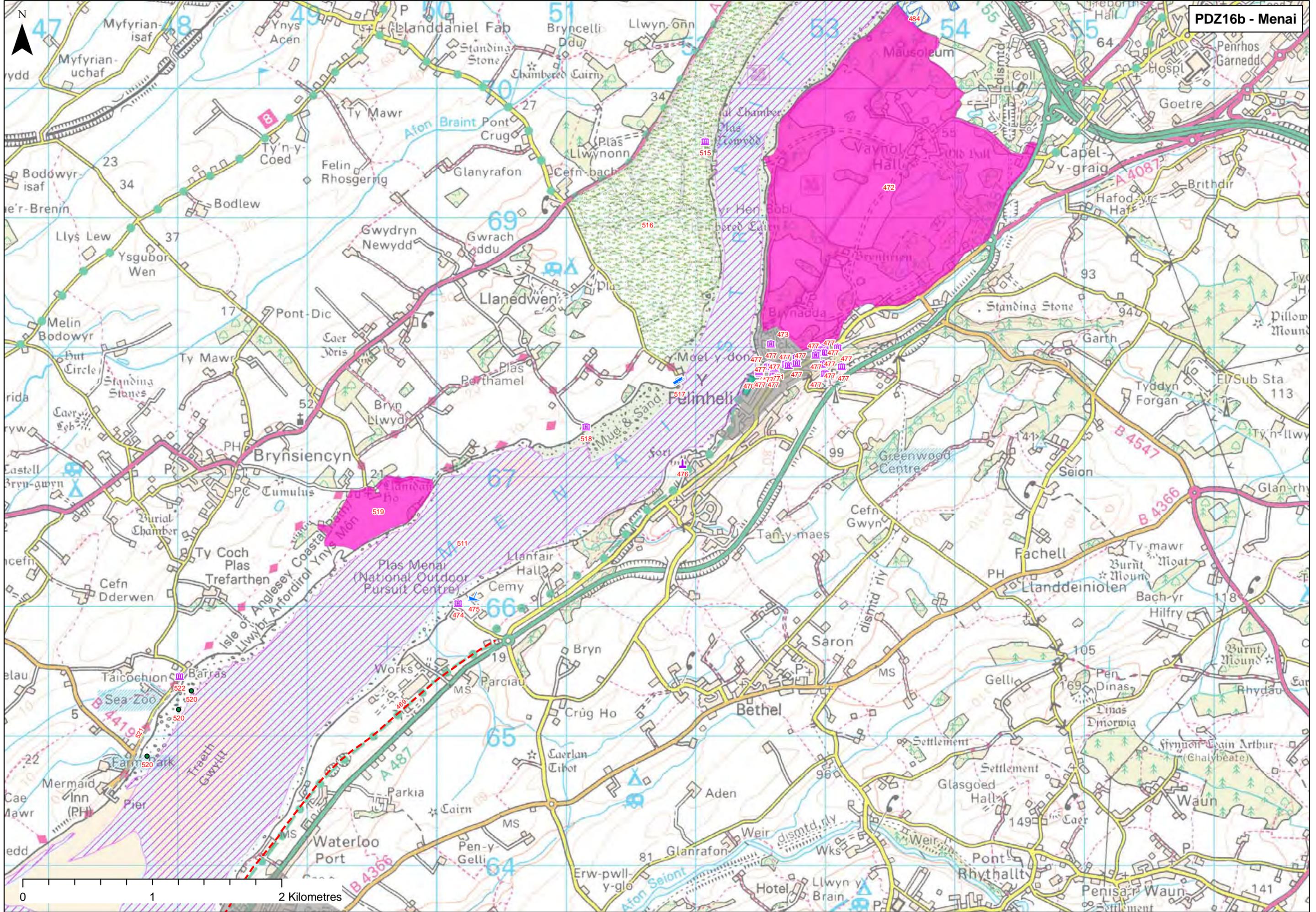
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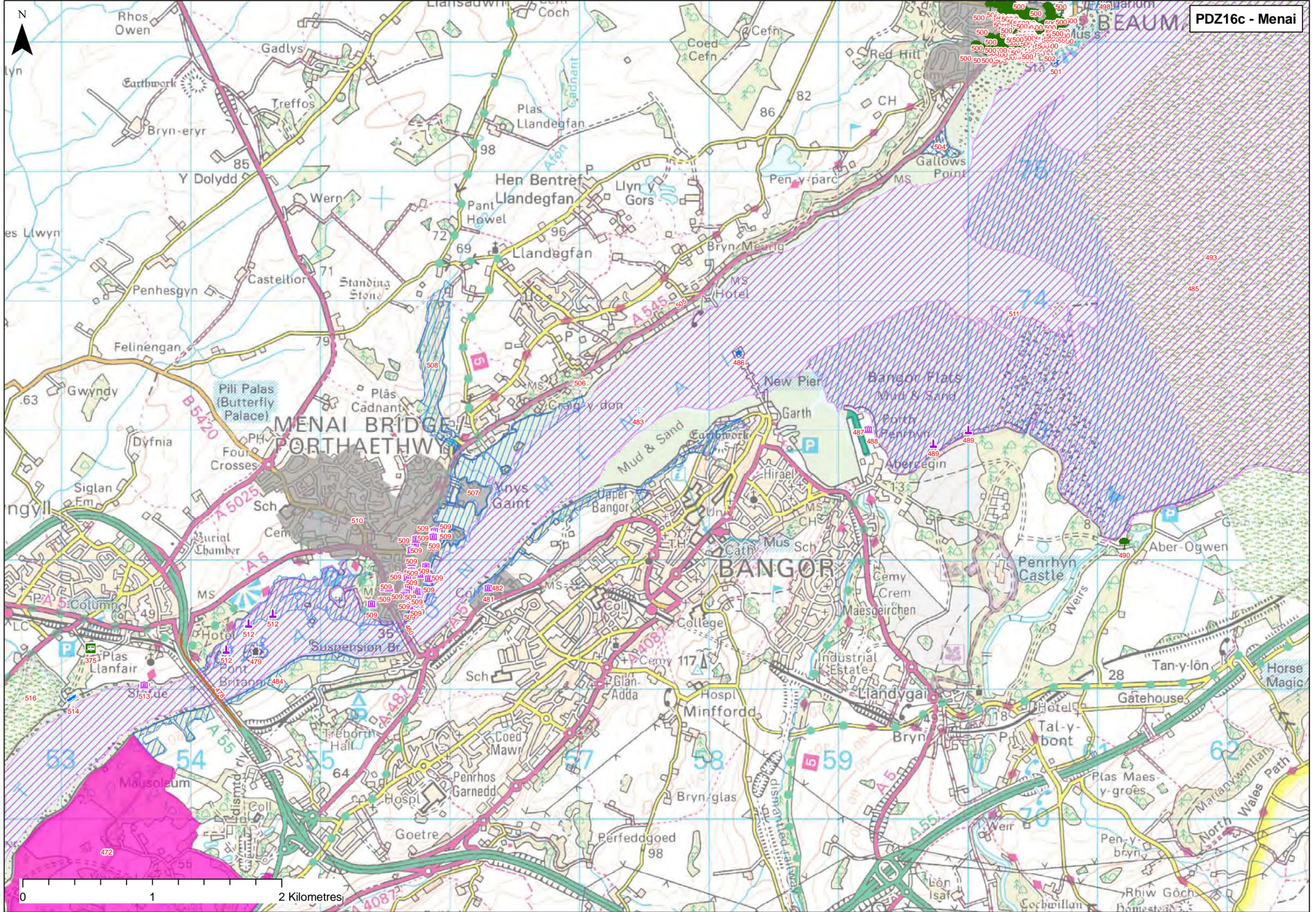
PDZ16b Menai - Trwyn Maen Dylan to Gerizim and Twyn y Parc to Penmon Point

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
469	F297	Caernarfon	Footpath	Footpath and cycle track	On the southern side of the river, at risk of flooding if water levels rise	Yes	Yes	Recreation and access for pedestrians and cyclists	Regional	R	Regional Community	No	Yes	Maintain public right of way
470	F298	Yfelinheli	Harbour / Marina	Marinas and docks	Currently experience flooding issues, likely to worsen over time	Yes	Yes	Boating access	Regional	C	Regional Community	No	Yes	Maintain function of marina and docks
471	F299	Yfelinheli	Properties	Settlement	Properties currently experience flooding issues, likely to worsen over time	Yes	Yes	Dwellings	Regional	HA	Regional Community	No	No	Prevent loss of property due to SLR
472	H104	Vaynol Park	Listed Building	Well preserved late 16th century walled and terraced garden including some listed structures	Some of this may be lost as water levels rise	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
473	F300	Y Felinheli	Listed Building	Yfelinheli LB	8th century archaeological importance	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting
474	H101	Menai Straits	Listed Building	Church of St Mary Cadw listed building	Situated immediately adjacent to the Menai Strait, may be lost to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting
475	F301	Yfelinheli	Boating / Shipyards	Plas Menai Water sports centre	Low lying on the edge of straits, likely to experience problems with future slr	Yes	Yes	Recreation, popular boating area	Regional	R	Regional Community	No	Yes	Maintain function of water sports amenity centre
476	H102	Port Dinorwig	SAM	Promontory Fort 'Dinas Camp' SAM	situated immediately adjacent to the Menai Strait, may lose part of site to SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and its setting
477	H103	Port Dinorwig	Listed Building	Many cadw listed buildings situated along menai straits and along nant y garth river	some of these properties may have issue as sea levels rise in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting
515	F410	Plas Newydd	Listed Building	Plas Newydd	Sensitive archaeology, Tunnel under house going to the dock will be underwater if sea walls are overtopped. The track around edge of estate is at risk if sea walls are not maintained and route to Rhododendron path could be cut off by sea level rise and no way round this for visitors at this time ie private track	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
516	H172	Plas Newydd	Historic Parks and Gardens	Landscaped 18th century park, Bryn yr Hen Bobl Burial Chamber and listed buildings	This estate is a popular visitors destination, and an historically important feature, situated on the NW shore of the Menai Straits, although elevated, there may be some loss of land in the future with SLR	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
517	F409	Moel y Don	Slipway and Access	Slipways and Jetties	May be lost with SLR	Yes	Yes	Access for recreation	Local	R	Local Community	No	Yes	Maintain access
518	H171	Moel y Don	Listed Building	Castell Gwylan LB,	Situated on the banks of the menai straits, may have issues with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
519	H170	Llanidan	Listed Building	Listed buildings and Historic park and garden located on the nw shore of the straits	May experience some loss of land with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
520	F408	Menai Straits	National Nature Reserve	Oyster beds and mussel beds	At risk of loss due to SLR	Yes	Yes	Ecological importance	Local	E	Local Community	No	No	To maintain or enhance the condition or integrity of the site and interest features within the context of a dynamic coastal system
521	F407	Menai Straits	Coastal Road	Coastal Road	Situated along th banks of the straits, likely to suffer loss/flooding due to erosion or SLR	Yes	Yes	Access road	Local	HA	Local Community	No	Yes	Maintain access
522	H169	Menai Straits	Listed Building	Yr Uncom, LB	Situated in a prominent location on the NW shore of the straits, likely to be floded with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access



PDZ16c Menai - Trwyn Maen Dylan to Gerizim and Twyn y Parc to Penmon Point

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
375	F236	Morfa Bychan	Caravan/Holiday Park/Camp Site	Caravan Park	Large caravan park, sat just behind and in places within the dune system. Likely to be lost due to roll back of dunes with coastal regression	Yes	Yes	Tourism	Local	R	Local Community	No	Yes	Maintain function of caravan park
478	H105	Menai Straits	Listed Building	Britannia Tubular Bridge	Important bridge LB, may be impacted by SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
479	F302	Menai Straits	Properties	Ynys Gored Goch	Small island in the menai straits, one or two properties on island, at great risk if sea levels rise	Yes	Yes	Dwellings	Regional	HA	Regional Community	No	No	Prevent loss of property due to SLR
480	F303	Menai Straits	Coastal Road	Telford Menai suspension bridge	Bridge connects Anglesey to mainland wales,	Yes	Yes	Access	Regional	HA	Regional Community	No	Yes	Maintain bridge for access to Anglesey
481	H106	Bangor	Listed Building	Low lying cadw listed buildings And 'Pier Camp' SAM	The majority of Bangor is situated on a hill, owever, the coastal, low lying properties may experience loss with SLR and erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
482	F304	bangor	Properties	City of Bangor Properties	is located on high ground, set back from the menai straits, however there are a few residential properties and buildings, ie bangor university and nursing home which may be at risk in the future	Yes	Yes	Properties	Regional	HA	Regional Community	No	No	Prevent loss of property due to SLR
483	F305	Menai Straits	Protected Wreck	Pwll Fannog, wreck	Lies on the shore about half a mile west of the britannia bridge, likely to be lost with SLR	Yes	Yes	Protected Wreck	National	H	National Community	No	No	To prevent deterioration or disturbance to historic wrecks
484	E056	Bangor	SSSI	Coedydd Afon Menai SSSI	Along the edge of the Menai Straits will be impacted by rise in water levels	Yes	Yes	National nature conservation interest (ecology / habitat including semi-natural woodland)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
485	E057	Bangor	SPA, SAC, SSSI	Lavan Sands, Conwy Bay SPA, Menai Strait and Conwy Bay SAC, Traeth Lafan SSSI,	Located n the Bangor Flats, with SLR these designations may suffer some loss	Yes	Yes	International and national nature conservation interest (ecology / habitat including mudflats, sandflats)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
486	F306	Bangor	Pier	Pier	Situated within the Menai straits, likkely to experience in the future	Yes	Yes	Provides access from Anglesey to mainland via ferry	National	HA	National Community	No	Yes	Maintain function of pier for ferry to Anglesey
487	F307	Port Penrhyn	Harbour / Marina	Tidal Harbour	May be at risk of flooding due to SLR	Yes	Yes	Port Penrhyn is a tidal harbour with a ramp capable of a 300tonne Ro Ro load. There is also a quay where sand and gravel dredged in Liverpool Bay, for use as aggregate and occasionally artificial beach recharge is landed. Fishing craft also operate from this harbour.	National	C	National Community	No	No	Maintain use of harbour
488	H107	Porth Penrhyn	Listed Building	Historic Park Penrhyn Castle	Situated on the mudflats of the Lavan Sands, will suffer loss with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
489	H108	Bangor Flats	SAM	Ogwyn Fish Weir SAM	Situated on the mudflats of the Lavan Sands, will suffer loss with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
490	H109	The Spinnies	Historic Parks and Gardens	Penrhyn Castle Historic Park	May have some land loss with SLR as its low lying, just landward of the Lavan sands	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
491	F308	Traeth Lafan	SPA, SAC, SSSI	SPA, SAC, SSSI	This designation lies on mudflats, likely to be impacted by SLR	Yes	Yes	International and national nature conservation interest (ecology / habitat including mudflats, sandflats)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
506	H176	Llandegfan	Historic Parks and Gardens	Plas Rhianfa, park	Terraced seaside vitorian gardens, may become flooded with SLR	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
507	F413	Ynys Gaint	Properties	Properties	If water levels rise, access to this island may deem an issue, properties may also suffer	Yes	Yes	Dwellings and character of the Straits	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
508	E081	Afon Cadnant	SSSI	Cadnant Dingle SSSI	although this is a river, the areas close to Menai Bridge town may be affected by SLR and as a result affect the habitats inland	Yes	Yes	National nature conservation interest (ecology / habitat including semi-natural woodland)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
509	H175	Menai Bridge Town	Listed Building	Many listed buildings	Some of which are situated very close to the shore, with SLR these properties may experience flooding	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
510	F412	Menai Bridge town	Properties	Coastal Properties	Situated on a rocky outcrop at a level of 20m, although properties closer to the straits may experience flooding issues with SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
511	E080	Menai Bridge town	SAC, SSSI	Menai Strait and Conwy Bay SAC, Glannau Porthaethwy SSSI	These designations cover both terrestriail and marine areas, may be affected by SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (ecology / habitat including reefs)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
512	H174	Menai straits	SAM	Coed M'r fish weir, Gorad Ddu fish weir SAMs	situated out in the straits, may have issues in the future	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
513	H173	Llanfair Pwllgwyngyll	Listed Building	Statue, and coastal propertioes, all LBs	These properties and features may be flooded/ suffer problems with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
514	F411	Llanfair Pwllgwyngyll	Slipway and Access	Slipway and boat park	Close to the edge of the straits, may experience flooding/loss due to SLR	Yes	Yes	Recreation and used for training centre	Regional	R	Regional Community	No	Yes	Maintain access for boating/recreation

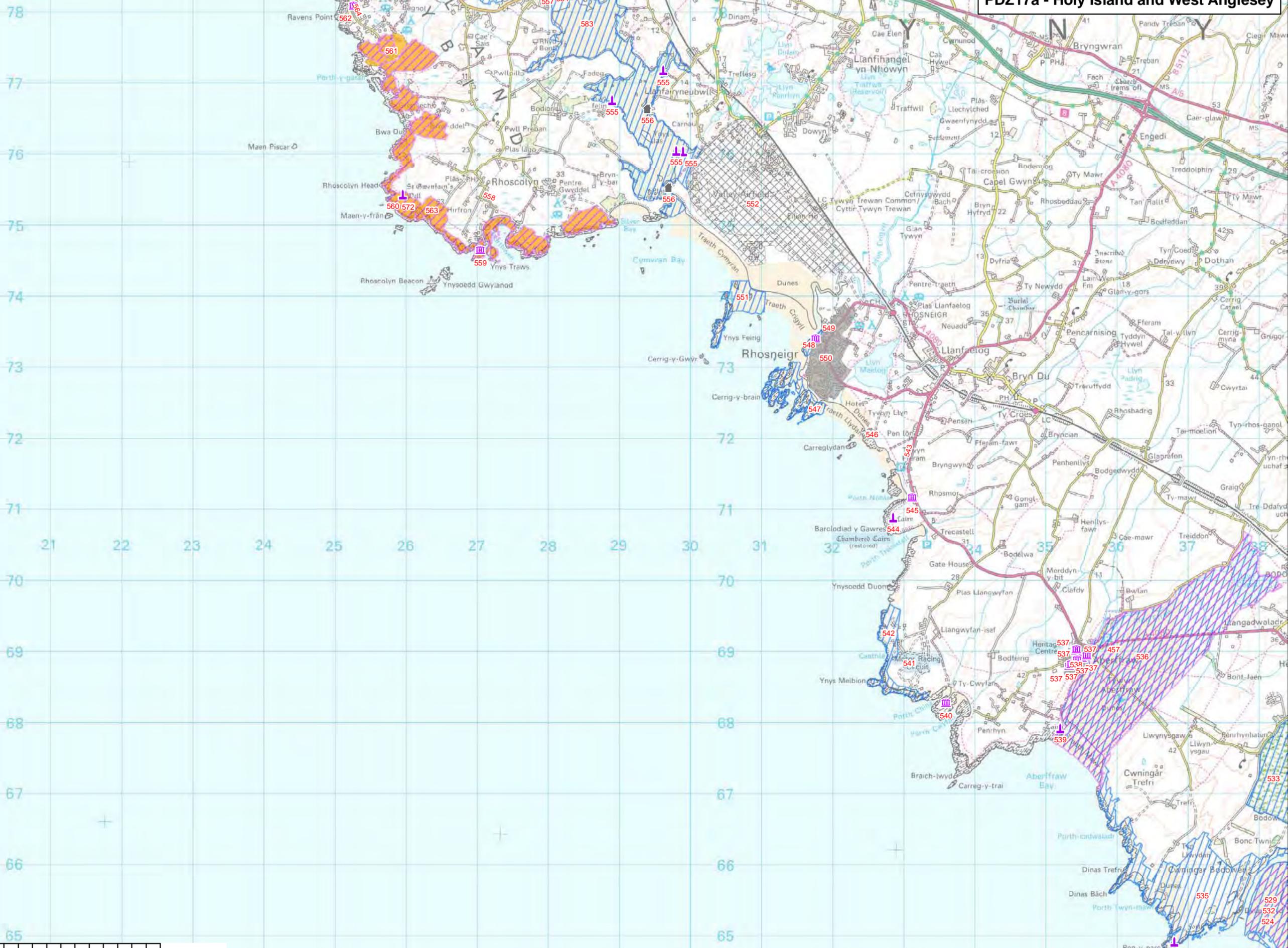


0 1 2 Kilometres

PDZ17a Holy Island and West Anglesey - Twyn y Parc to Twyn Cliperau

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
530	F404	Malltraeth	Properties	Properties	Likely to experience issues if water levels rise and change the behaviour of the river and estuary	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
531	F403	Malltraeth	Issue without Objective	Malltraeth canals	the canals discharge into the sea through tidal flaps which open during periods of low water. The effects of controlling the run off of the catchment have created conditions that have encouraged accretion of the intertidal zone and assisted in the development of the dune area formation, if water levels rise, this will significantly impact the surrounding coastline									
532	F402/E079	Malltraeth sands/marsh	SAC, SSSI	Anglesey coast saltmarsh SAC, Newborough Warren SSSI, Ynys Llanddwyn National Nature Reserve	Covers a large area of south west Anglesey coastline, may lose some areas with SLR and coastal flooding in the future	Yes	Yes	International and national nature conservation interest (ecology / habitat and geology including coastal geomorphology of Wales)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
533	H166	Malltraeth Sands	Historic Parks and Gardens	Bodorgan historic parks and gardens	this area of land is situated to the north west of the mudflats of the afon cefni, and may experience flooding with a rise in water levels	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
534	H165	Cwningar Bodowen	SAM	Twyn y Parc promontory fort SAM	This fort covers the headland to the north west of the mouth of the Afon Cefni, with cliff erosion, there may be issues in the future	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
535	E078	Cwningar Bodowen	SSSI	Penrhynoedd Llangadwaladr SSSI	Situated on a rocky headland, may lose some small areas with coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology / habitat and geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
536	F401/E077	Twyn Aberffraw	SPA, SAC, SSSI	SPA, SAC, SSSI	May experience flooding/land loss due to SLR close to the afon Ffraw and caostal via aberffraw sands	Yes	Yes	International and national nature conservation interest (ecology / habitat and geomorphology including dunes, lakes and estuary)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
537	H164	Aberffraw	Listed Building	There are a few listed buildings, and a bridge that is aSAM in this town	Although Aberffraw is located inland from the coast, it may have issues in the future with flooding due to a rise in water levels	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
538	F400	Aberffraw	Properties	Properties	Located on a small river, may experience flooding issues with SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to SLR
539	H163	Aberffraw Sands	SAM	Trwyn Du round cairn SAM	this cairn is sat on a small headland, to the north west of aberffraw sands, if the dynamics in the ffraw river change there may be erosion of this cliff	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
540	H162	Porth Cwyfan	Listed Building	Church of St Cwyfan LB	This listed building is located on a rocky low lying island accessed at low tide. With SLR access may be an issue and the church may experience some loss of land.	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
541	F399	Trwyn Ifan		Motor racing school	Situated on a cliff, although unlikely to suffer any flooding, may be affected if cliffs recede in the future	Yes	Yes	Recreation	Regional	R	Regional Community	No	Yes	Maintain function of motor school
542	E076	Ty Croes	SSSI	Ty Croes SSSI	Rocky cliffs may experience some coastal recession in the future. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (ecology and habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
543	F398	Porth Trecastell	Coastal Road	Car park and coastal road	Car park situated behind the sandy bay, at risk of flooding/loss due to coastal recession	Yes	Yes	Access to beach	Local	HA	Local Community	No	Yes	Maintain access
544	H161	Porth Trecastell	SAM	Barclodiad y Gawres Burial chamber and Mynydd Bach round cairn SAMs	Situated on a rocky headland, reasonably close to cliff edge, may have issues with cliff erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
545	H160	Porth Nobla	Listed Building	Tyn Towyn cottage LB	Situated close to the beach in an elevated position, this property may experience loss with coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
546	F397	Treath Llydan	Properties	Properties	A handful of houses are situated behing a small outcrop, south of traeth llydan, may be at risk due to SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
547	F396/E075	Rhosneigr	SSSI	Rhosegnir Reefs SSSI	A rocky outcrop to the south west of the town, may be lost to deeper water with SLR	Yes	Yes	National nature conservation interest (caves, rockpools, under-boulders)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
548	E074	Rhosneigr	SSSI	SSSI located to the north of Rhosegnir on traeth crigyll	May be lost to SLR or shoreline recession of beach	Yes	Yes	National nature conservation interest (ecology/habitat and geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
549	H159	Rhosneigr	Listed Building	Stretch of sea wall at surf point, LB	This small stretch of sea wall is situated very close to the shore, just behind some rocks, possibly will be damaged/ lost due to coastal erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
550	F395	Rhosneigr	Properties	Properties	Situated on a promontory with soft shoreline either side, may experience issues with coastal flooding	Yes	Yes	Dwellings, historically impotant town, used to be the ship building centre for Anglesey	Local	HA	Local Community	No	No	Prevent loss of properties due to flooding
551	F394/E073	Ynys Feurig	SPA, SAC, SSSI	Cemlyn Bay and the Skerries SPA, Ynys Feurig SSSI	Situated on a rocky peninsular, also acts as an anchor for the beaches of Cymyran and crigyll. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (ecology / habitat and geology)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
552	F393	RAF Valley	Airbase/Airport	RAF base	built on a large dune system, likely to experience problems in the future with coastal recession and sea level rise, fronted by wide sandy beach area is also a SSSI	Yes	Yes	RAF training base for jet pilots and a base for search and rescue helicopters, SSSI	National	HA	National Community	No	No	Maintain function of RAF training base
554	H157	Afon Alaw	Listed Building	Four Mile Bridge, LB	Spanning the Alaw this bridge may suffer in the future with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
555	H156	Rhyd y Gari sand	SAM	Feilin Carnau Tide Mill, Felin Wen tide mill and bodior tide mill SAM	these tide mils are situated with the mudflats of the afan alaw and will probably experience problems with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting

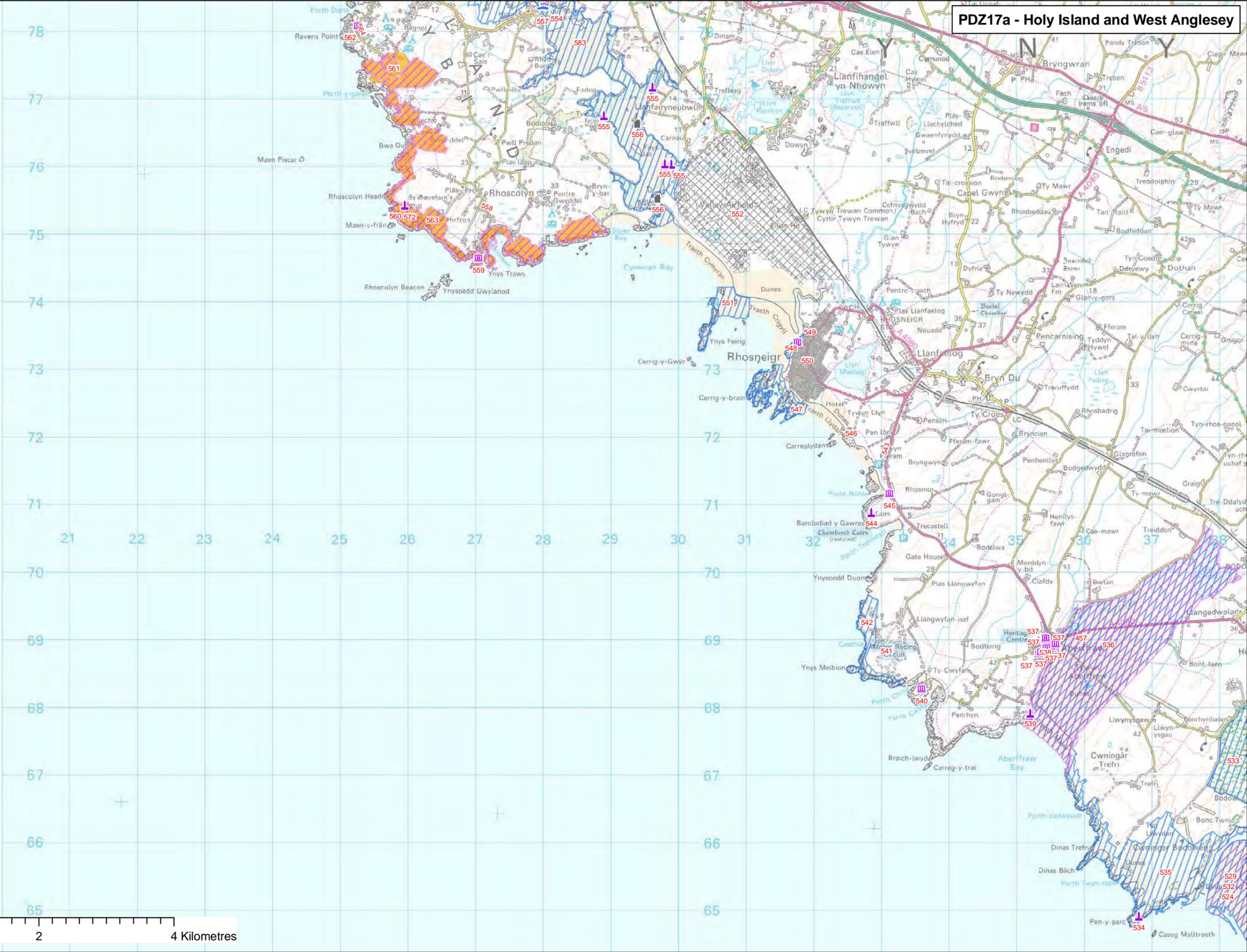
PDZ17a - Holy Island and West Anglesey



PDZ17a Holy Island and West Anglesey - Twyn y Parc to Twyn Cliperau

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
556	F392	Afon Alaw	Properties	Coastal/ estuarine properties	Properties sat on the edge of the Alaw may be at risk of future flooding	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to flooding
557	F391	Access road over Four mile bridge	Coastal Road	Bridge and embankment	This bridge, situated over the Afon Alaw straits, to the south of the Stanley embankment bridge, may suffer with SLR	Yes	Yes	Access to Holy Island	Regional	HA	Regional Community	No	Yes	Maintain access
558	F390	Rhoscolyn	Car Park	Car park and access road	Small pocket beach,sheltered from prevailing weather due to headland disposition, however the access point to this beach may be lost with coastal recession	Yes	Yes	Access to beach	Local	HA	Local Community	No	Yes	Maintain access
559	H154	Rhoscolyn	Listed Building	Rhoscolyn Lookout station listed building	This LB is situated at the end of a rocky headland and may be lost to cliff erosion in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
560	H152	Rhoscolyn	SAM	Ffynnon Gwenfaen well, SAM	This Holy Well is set back slightly from a small recess in the cliff, however it may experience some problems in the future with coastal eroision	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
561	F389	Trearddur Bay	Caravan/Holiday Park/Camp Site	Caravan parks and campsites	Close to edge of the coast, may experience issues with coastal recession	Yes	Yes	Tourism	Local	R	Local Community	No	Yes	Maintain function of caravan and camp site
562	H151	Porth Castell	Listed Building	Porth y Castell Listed building	situated on a cliff overlooking porth diana, may suffer loss with cliff erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
560	H152	Rhoscolyn	SAM	Ffynnon Gwenfaen well, SAM	This Holy Well is set back slightly from a small recess in the cliff, however it may experience some problems in the future with coastal eroision	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
564	F387	Trearddur Bay	Coastal Road	Coastal road	The road is located either on low lying ground, close to shore or on the edge of soft clay cliffs, lilkey to experience future issues	Yes	Yes	Access	Regional	HA	Regional Community	No	Yes	Maintain access

PDZ17a - Holy Island and West Anglesey



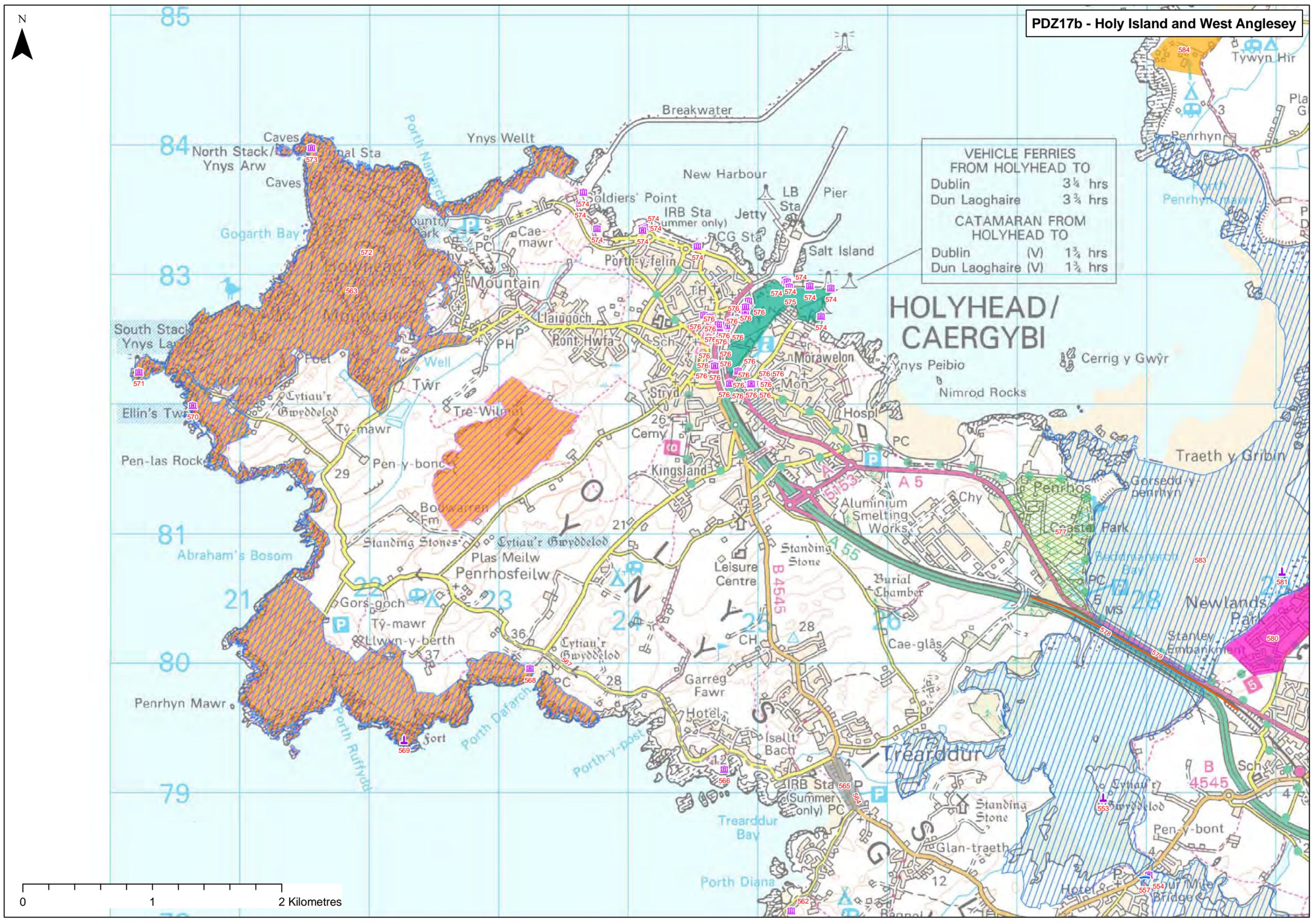
PDZ17b Holy Island and West Anglesey - Twyn y Parc to Twyn Cliperau

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
553	H158	Afon Alaw	SAM	Ynys Leurad Hut circles SAM	Situated on the edge of the Afon Alaw this SAM may experience loss of land with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
565	F386	Trearddur Bay	Properties	Properties	The bay has a continuous line of coastal defences extending around its perimeter and the shoreline appears to be out of equilibrium at the north western end, the properties could be at risk if the shoreline continues to recede without defence or may suffer coastal flooding	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to erosion
566	H150	Ynys Gybil	Listed Building	Craig y Mor Listed building	In an elevated position on a rocky promontory, may suffer loss in the future with cliff erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
566	F363	Amlwch	Properties	Works'	if still in use, likely to be lost due to coastal recession	Yes	Yes	employment, important for area??	Regional	C	Regional Community	No	No	Maintain function
567	F385	Porth Dafach	Coastal Road	Coastal road	This road is situated at the backshore of a small pocket beach , a defence exists in front of this road to defend it, it may be at risk of flooding in the future	Yes	Yes	One of the few roads on the west side of the island, most of the north west coast is only accessible by sea or this road. The access for beach is required for divers, surfers and swimmers	Regional	HA	Regional Community	No	Yes	Maintain access
568	H149	Porth Dafarch	Listed Building	Old customs post listed building	set within the cliffs may have issues with cliff erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
569	H148	Trearddur	SAM	Dinas Porth Ruffydd SAM	this hillfort, is situated on the rocks to the south west of trearddur and will have some loss due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
570	H147	South Stack	Listed Building	Ellens Tower listed building	Situated on a cliff, overlooking the sea, this tower may be lost in the future with cliff erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
571	F384	South Stack	Listed Building	South Stack lighthouse	Accessible via a footpath, this lighthouse, which is a listed building, along with additional listed buildings, situated on a small rocky outcrop is at risk of becoming cut off from the mainland	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
572	F383/E071	Holy Island	SPA, SAC, SSSI	Holy Island Coast SPA and SAC, SSSI	Covers a large portion of the north west corner of holy island, may have some loss of these designations with coastal recession and SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest (ecology / habitat and geology)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
573	F382	Gogarth Bay	Listed Building	Fog Signal Station	Listed building on the edge of a cliff, may be lost to cliff erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
574	F381	Holyhead	Listed Building	Settlement and listed buildings	A very large settlement, located close to the rocky coastline, may be at risk in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
575	F380	Holy Island	Harbour / Marina	Holyhead harbour old and new	May be at risk in the future with SLR, lies at a low level, 3-4m above sea level. Currently defended by breakwater	Yes	Yes	Major harbour, allowing ferry crossings to Ireland	National	HA	National Community	No	Yes	Maintain function of Harbour
576	H146	Holyhead	Listed Building	Harbour, many listed buildings and historical features	Although this town is defended with hard structures, some of these listed buildings (lighthouses roman fort) may have some loss due to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
577	F379	Holy Island	National Nature Reserve	Coastal park and nature reserve	This part of the coastline has been subject to erosion in the past, may worsen in the future	Yes	Yes	National nature conservation interest	National	E	National Community	No	No	To maintain the conservation, amenity and education benefits of the NNR
578	F378	Afon Alaw	Railway	Embankment	Main A5 road and railway line cross the Alaw on this embankment and bridge, this construction may be vulnerable to exposure changes and bank and channel arrangements associated with the interface of the shoreline of the Alaw estuary.	Yes	Yes	Main transport link onto Holy Island, a large settlement and a harbour, used for ferry crossings to Ireland	National	HA	National Community	No	No	Maintain embankment to allow for access
579	H145	Afon Alaw	Listed Building	Stanley Embankment	Listed building (bridge and toll house) and SAM (quay) these features may have issues in the future with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
580	F377	Newlands Park	Listed Building	Listed buildings	small settlement on the south side of the Alaw estuary, fronted by a wide sandy foreshore, may be at risk with SLR or if the main channel of the Alaw migrates	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
581	H144	Valley C	SAM	Newlands Fish Weir SAM	This feature extends into the Afon Alaw estuary and will be subject to issues if water levels rise	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
582	F376	Holyhead Bay	Properties	Coastal farms/properties	Low lying properties, may suffer in the future with coastal recession	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to erosion
583	E070	Porth Penrhyn Mawr	SSSI	Beddmanarch Cymyran SSSI	Spans from Porth Dryw headland along the Afon Alaw estuary past Holyhead, may suffer some habitat loss due to SLR	Yes	Yes	National nature conservation interest. Variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system



VEHICLE FERRIES FROM HOLYHEAD TO	
Dublin	3 ¼ hrs
Dun Laoghaire	3 ¾ hrs
CATAMARAN FROM HOLYHEAD TO	
Dublin (V)	1 ¾ hrs
Dun Laoghaire (V)	1 ¾ hrs

HOLYHEAD / CAERGYBI



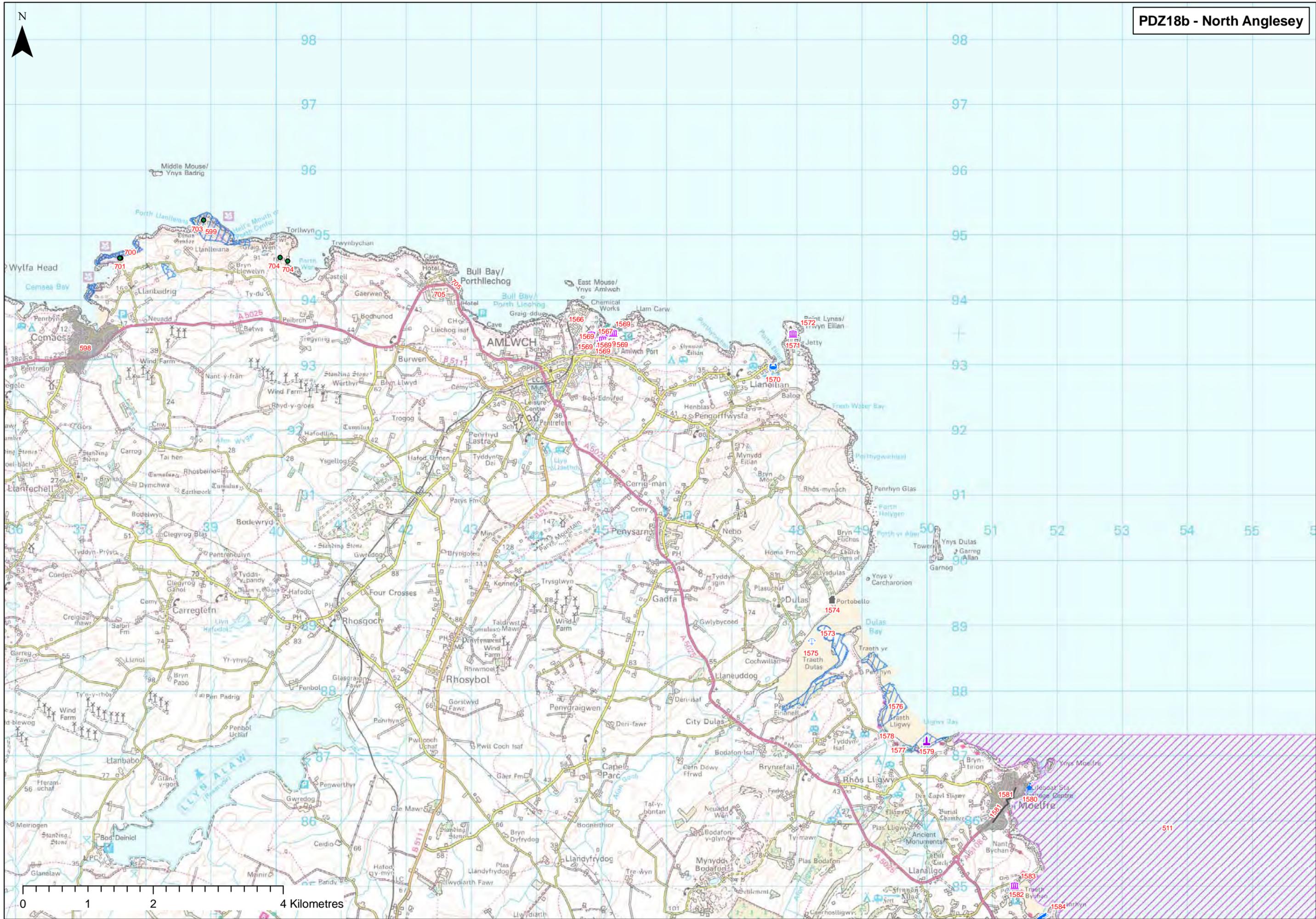
PDZ18a North Angelsey - Twyn Cliperau to Trwyn Cwmrwd

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
584	F375	Porth Delysg	Caravan/Holiday Park/Camp Site	Caravan and campsite	Situated on a low lying rocky headland may be vulnerable to SLR	Yes	Yes	Tourism and recreation	Local	R	Local Community	No	Yes	Maintain function of camping and caravan site
585	H143	Tre Fadog	SAM	Castell SAM	The promontory fort is situated behind a rocky outcrop to the south of trefadog beach and may suffer loss due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and its setting
586	H142	Porth Trefadog	Listed Building	Anglesey LB close to the coast	This property may experience flooding issues with SLR and coastal recession	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
587	F374	Porth Trefadog	Properties	Coastal properties	Low lying, intervention has taken place along this bay to prevent further erosion, risk of loss in the future	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to erosion
588	F373	Porth Trwyn	Properties	Coastal properties	Situated on soft clay cliffs, vulnerable to erosion, may have issues with coastal recession	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to erosion
589	F372	Porth Swtan	Footpath	Footpath	The backshore cliffs of this bay, where the footpath lies, are formed from a matrix of volcanic ash and mud and are vulnerable to erosion	Yes	Yes	Public right of way	Local	R	Local Community	No	Yes	Maintain public footpath
590	F371	Porth Swtan	Sewage Works	Access road onto beach	Fronted by rocky outcrop, however, may be subject to some flooding in the future	Yes	Yes	Beach access	Local	R	Local Community	No	Yes	Maintain access
591	E069	Clegir Mawr	SSSI	Clegir Mawr SSSI	On a rocky outcrop north of Church Bay, may suffer some loss of designation in the future. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (botanical)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
592	F370	Llyn y Fydlyn	SSSI	Freshwater lagoon	At risk of loss with SLR	Yes	Yes	National nature conservation interest (ecology)	Regional	E	Regional Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
593	E068	Carmel Head	SSSI	Carmel Head SSSI	SSSI along section of this rocky headland, may have some loss with coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
594	E067	Hen Borth	SSSI	Hen Borth SSSI	Small bay, may have loss of habitat due to SLR	Yes	Yes	National nature conservation interest (geomorphology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
595	F369/E066	Cemlyn Bay	SPA, SAC, SSSI	Cemlyn Bay and the Skerries SPA, Cemlyn Bay SAC and SSSI	This designation covers the entire cemlyn bay area, may have some loss due to SLR and coastal recession. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	International and national nature conservation interest - Tidal rivers, estuaries, mudflats, sandflats, lagoons (including saltwork basins)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
596	F368	Porth y Galen-ddu		Wylfa Power Station	Situated on the edge of a cliff, may be lost with coastal recession	Yes	Yes	One of only two nuclear power stations in Wales, visitor centre	National	HA	National Community	No	No	Prevent loss of properties due to erosion
597	H141	Porth y Felin	Historic Parks and Gardens	Cestyll historic park and listed buildings	There may be some loss of land of this park due to coastal erosion, as it lies fairly close to coast	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
598	F367	Cemaes Bay	Properties	Properties	Located behind a sea wall and breakwater, at risk of experiencing future issues with SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
599	E065	Porth Llanlleiana	SSSI	Llanbadrig- Dinas Gynfor SSSI	Situated on the rocky headlands between cemaes bay and porth wen, these SSSI site, may result in habitat loss due to coastal recession	Yes	Yes	National nature conservation interest (geology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the site and interest features within the context of a dynamic coastal system

PDZ18b North Anglesey - Twyn Cliperau to Trwyn Cwmrwd

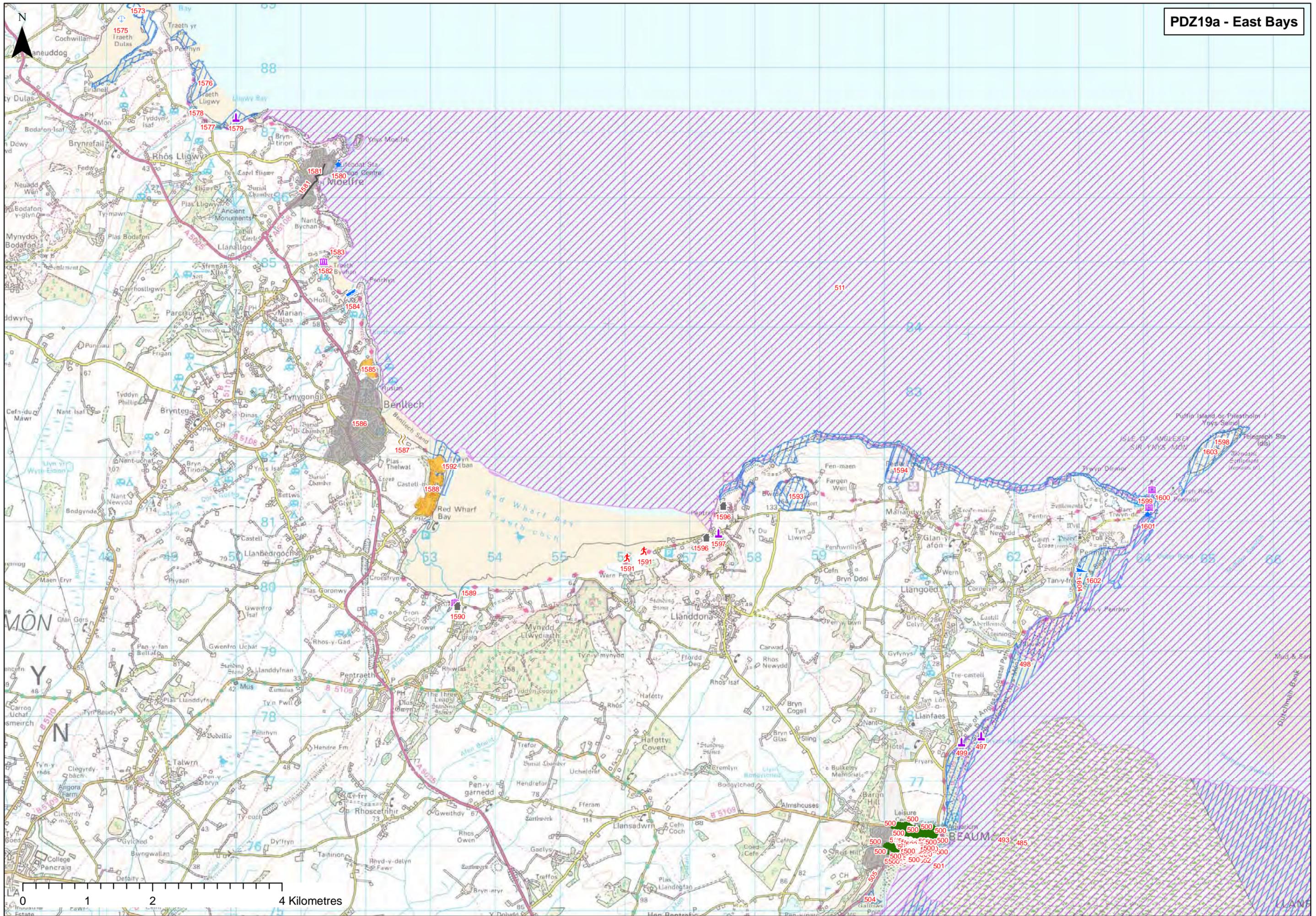
ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
1560	H140	Llanbagrig Point	Listed Building	Church of St Padrig Anglesey LB	Close to cliff edge on a small headland, may be lost to cliff erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
1561	F366	Llanbadrig	Listed Building	Church and graveyard	Situated on the edge of a cliff, may be lost with coastal recession	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
1562	F365	Porth Wen	Listed Building	Disused kiln, works	Close to cliff edge, may be lost to coastal recession in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
1563	H139	Llanlleiana Head	SAM	Dinas Gynfor Hill fort SAM	This SAM covers the headland of Porth Llanlleiana and is likely to experience issues with cliff erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and its setting
1564	H138	Porth Wen	SAM	Porth Wen brickworks SAM	The disused brickworks are situated to the north east of Porth Wen, likely to have some loss of land due to coastal erosion	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and its setting
1565	F364	Porthlechog	Coastal Road	Coastal road and properties	Close to the shore, likely to experience issues in the future with SLR	Yes	Yes	Dwellings and access	Local	HA	Local Community	No	No	Maintain access and prevent loss of properties due to SLR
1567	F362	Amlwch	Harbour / Marina	Harbour	Risk of flooding in the future	Yes	Yes	Busy port for pilot boats and fishing boats	Regional	C	Regional Community	No	No	Maintain function of harbour
1568	H137	Amlwch	Listed Building	Many Anglesey listed buildings	Situated near the coast, seaward of the coast road within an inlet. These properties may experience issues with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
1569	F361	Amlwch	Listed Building	Listed buildings	Close to the coast at risk of being lost to SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
1570	F360	Porth Eilean	Beach	Beach and Slipway	Sandy bay has required intervention measures to prevent erosion in the past due to the wave climate in the area as a result of the orientation of port llynas. Likely to worsen in the future with SLR, slipway likely to be lost	Yes	Yes	Beach access	Local	R	Local Community	No	No	Maintain access
1571	H136	Port Llynas	Listed Building	Point Llynas lighthouse and telegraph station, Anglesey LBs	Although this feature is situated on a rocky headland, about 30m from cliff edge, there is a risk of some loss of this property due to cliff erosion	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and its setting and to maintain access
1572	F359	Port Llynas	Boating / Shipyards	Lighthouse	Although located on a headland, fairly close to cliff edge (30m) maybe at risk in the future	Yes	Yes	Navigation	Regional	HA	Regional Community	No	Yes	Maintain function of lighthouse for navigational purposes and heritage value
1573	F290/E064	Morfa Dulas	SSSI	Coed y gell and Morfa Dulas SSSI	This SSSI forms the tip of the spit on the southern side of the Afon Gich estuary, may have flooding issues in the future	Yes	Yes	National nature conservation interest (ecology / habitat - woodland, dune grassland and saltmarsh)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1574	F358	Dulas Bay	Properties	Coastal Properties	At risk if circulatory current causes a change to the dynamics of this area (see SMP1)	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to erosion

Yes



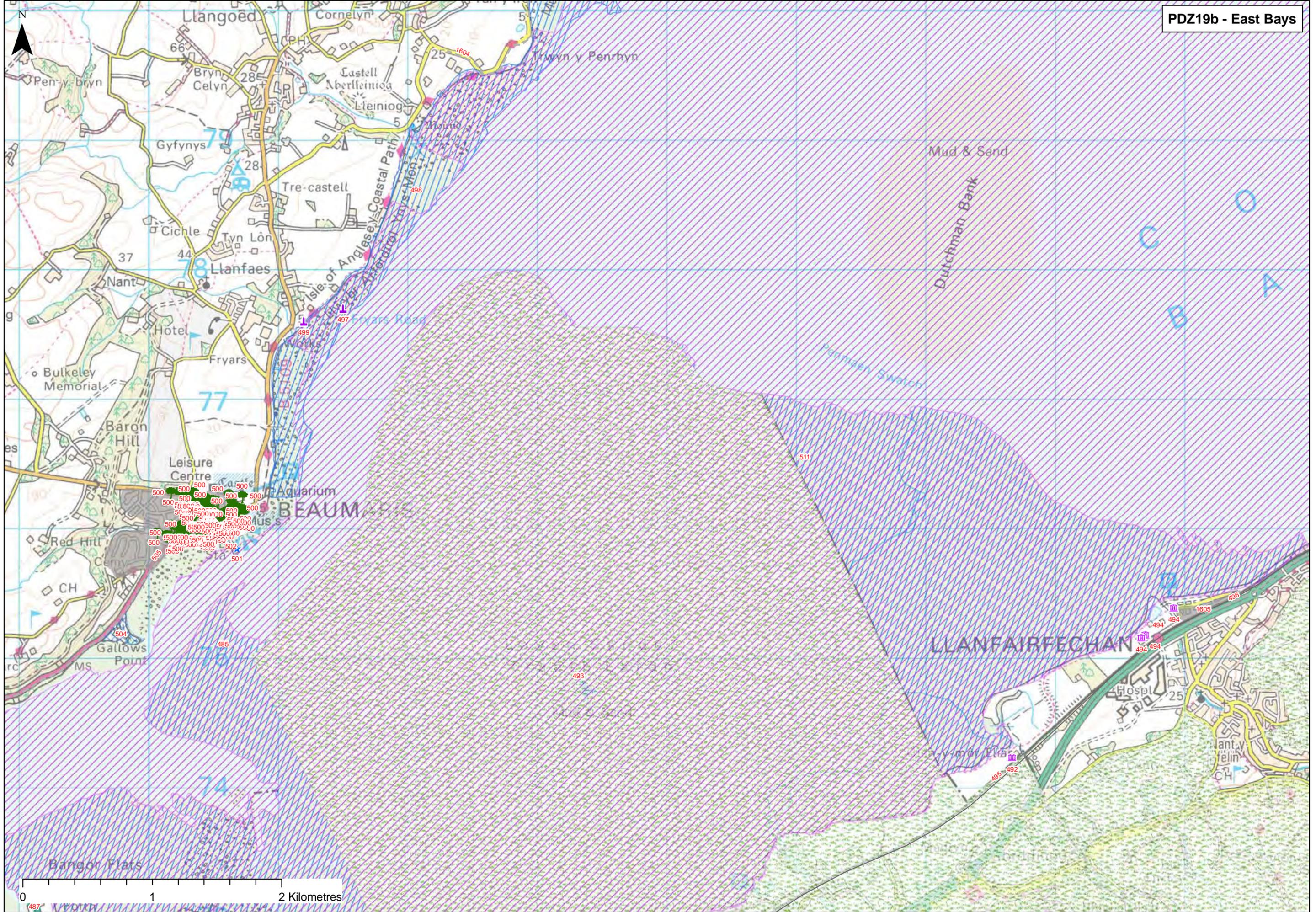
PDZ19a East Bays - Trwyn Cwmrwd to Penmon Point

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
498	E082	Beaumaris	SSSI	Glannau Penmon - Bwmares SSSI	Situated on the north of the menai straits on the mudflats, may experience loss with SLR	Yes	Yes	National nature conservation interest (ecology/habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1575	F357	Treath Dulas	Protected Wreck	Wreck	At risk of loss of wreck with SLR	Yes	Yes	Protected Wreck	National	H	National Community	No	No	To prevent deterioration or disturbance to historic wrecks
1576	F356/E063	Treath Lligwy	SSSI	SSSI	On shoreline edge of Traeth Lligwy and the headland of Penrhyn, may suffer loss of sssi due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1577	F355	Lligwy Bay	Car Park	Car parks and beach access	Likely to be lost with shoreline recession	Yes	Yes	Car parking for recreation	Local	R	Local Community	No	Yes	maintain car parking facilities and access to beach
1578	F354	Lligwy Bay	Airbase/Airport	Beach	potential issue with drainage of afon lligwy and tidal waters becoming trapped by high offshore sand banks. Waters congregate at the toe of the dunes and move out to sea via a rip channel formation. Could potentially be a threat to beach users if beach e	yes	no			I				maintain beach for boating/recreation
1579	H135	Lligwy Sands	SAM	Treath Lligwy Fish Weir SAM	Situated in the south east corner of the bay, this feature may experience issues with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
1580	F353	Moelfre	Lifeboat/ Lifeguard Station	RNLI Station	Located seaward of the shoreline, this may experience issues in the future with coastal recession and flooding	Yes	Yes	Rescue service for area. This is one of the most used lifeboats in Wales	Regional	HA	Regional Community	No	Yes	Maintain function of Lifeboat station
1581	F352	Moelfre	Properties	Coastal properties and coastal road	Situated close to the shoreline, although protected with retaining walls, the road and properties may be at risk to flooding as a result of SLR	Yes	Yes	Dwellings and access	Regional	HA	Regional Community	No	Yes	Prevent loss of properties and coastal road due to coastal recession
1582	F351	Treath Bychan	Properties	Coastal properties and caravan parks	close to cliff edge, may be at risk due to coastal recession	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to coastal recession
1583	H134	Treath Bychan	Listed Building	Lime Kilns, Anglesey Listed buildings	these kilns are both situated on the high water mark, and may be lost to the sea with coastal recession	Yes	Yes	Listed Building	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
1584	F350	Treath Bychan	Slipway and Access	Slipway and boat park	Boat park is situated on top of a cliff on the eastern side of the headland, the slipway cuts across the headland down into treath bychan, with coastal recession there may be future issues with both of these features	Yes	Yes	Tourism and recreation, area is popular for small boat sailing, angling and water skiing	Local	R	Local Community	No	Yes	Maintain access to beach and boat storage facilities
1585	F349	Benllech	Caravan/Holiday Park/Camp Site	Caravan Park	Situated on the edge of a cliff, very much at risk to experiencing issues with coastal recession	Yes	Yes	Tourism and recreation	Local	R	Local Community	No	Yes	Maintain function of caravan and camp site
1586	F348	Benllech	Properties	Benllech town properties	Although town is situated on higher ground, the frontage may experience erosion problems when water levels rise. The road is close to the shingle beach and is likely to experience flooding issues	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to flooding
1587	F347	Benllech	Sewage Works	Sewage treatment works	Close to shore, likely to be affected by coastal erosion	Yes	Yes	Sewage treatment for red wharf bay and benllech	Local	HA	Local Community	No	Yes	Maintain function of sewage treatment works
1588	F346	Red Wharf Bay	Caravan/Holiday Park/Camp Site	St Davids campsite and caravan park	Large campsite, low lying at risk of loss if water levels rise	Yes	Yes	Tourism and recreation	Local	R	Local Community	No	Yes	Maintain function of caravan and camp site
1589	H133	Red Wharf Bay	Listed Building	Anglesey LB bridge	Spanning a narrow tributary and carrying the coastal road, this bridge may water levels rise in the afon Nodwydd	Yes	Yes	Listed Building	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
1590	F345	Red Wharf Bay	Properties	Coastal cottages	Low lying dwellings likely to be lost to SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
1591	F344	Red Wharf Bay	Access	Access points and footpaths	Footpath required for access to popular bathing/fishing beach could become an issue due to cliff collapse and coastal recession	Yes	Yes	Access onto Red Wharf bay	Local	R	Local Community	No	Yes	Maintain access
1592	F343/E062	Trywn Dwiban	SSSI	SSSI	Situated on the coastal extent of this large sandy bay, may experience loss of habitat with sea level rise. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1593	F342	Bwrdd Arthur	SSSI	SSSI	At risk of loss of habitat due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1594	F341	Tandinas Quarry	SSSI	SSSI	At risk of loss of habitat due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1595	F340	Fedw Fawr	SSSI	SSSI	At risk of loss of habitat due to SLR. Changes to natural coastal processes essential for the integrity of the interest features	Yes	Yes	National nature conservation interest (habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1596	F339	Red Wharf Bay	Properties	Llandonna beach, coastal properties	Low lying coastal properties may be at risk due to sea level rise	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR
1597	H132	Red Wharf Bay	SAM	Llandonna Fish Weir SAM	on the eastern edge of red wharf bay, if sea levels rise, this feature may experience issues	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
1602	F337	Porth Penmon	Boating / Shipyards	Landing stage	Situated out into the straits, is at risk of becoming submerged due to SLR	Yes	Yes	Possibly still in use, not only a recreational feature but also an anchorpoint for the embayment	Local	HA	Local Community	No	Yes	Maintain access for boating/recreation



PDZ19b East Bays - Trwyn Cwmrwd to Penmon Point

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
497	H179	Llanfaes and Llangoed	SAM	Gorad Friars Bach fish weir, Aberlleiniog fish weir I and II and trectastell fish weir SAM	Extends out into the straits, may have future issues with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
499	H178	Llanfaes	SAM	Site of friary SAM	Situated to the landward side of the coastal road, low lying and vulnerable to flooding due to SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
500	H177	Beaumaris	Historic Parks and Gardens	Historic gardens, castle and listed buildings	Situated on the north side of the Menai Straits, with SLR this important historic town may experience problems	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
501	F418	Beaumaris	Pier	Pier	Likely to experience problems in the future	Yes	Yes	Mainly used for recreation	Local	R	Local Community	No	Yes	Maintain angling amenities
502	F417	Beaumaris	Lifeboat/ Lifeguard Station	RNLI Station	Close to the edge of the straits, may experience flooding/loss due to SLR	Yes	Yes	Required for rescue	Regional	HA	Regional Community	No	Yes	Maintain function of Lifeboat station
503	F416	Beaumaris	Properties	Properties	Properties at risk of loss due to SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	Yes	Prevent loss of properties due to SLR
504	F415	Beaumaris	Boating / Shipyards	Boatyard	Situated on a reclaimed headland, low lying at risk of flooding/loss due to erosion	Yes	Yes	Recreation and boating	Local	R	Local Community	No	Yes	Maintain function of boat storage
505	F414	Llandegfan	Coastal Road	Coastal road and properties	Properties are seaward of the road, at great risk of loss due to SLR and erosion	Yes	Yes	Dwellings and access road	Local	HA	Local Community	No	Yes	Prevent loss of property due to SLR and maintain access
1604	F336	Menai Straits	Coastal Road	Penmon Coastal road	Located on the edge of the menai straits, likely to suffer issues of water levels rise	Yes	Yes	Access	Regional	HA	Regional Community	No	Yes	Maintain access

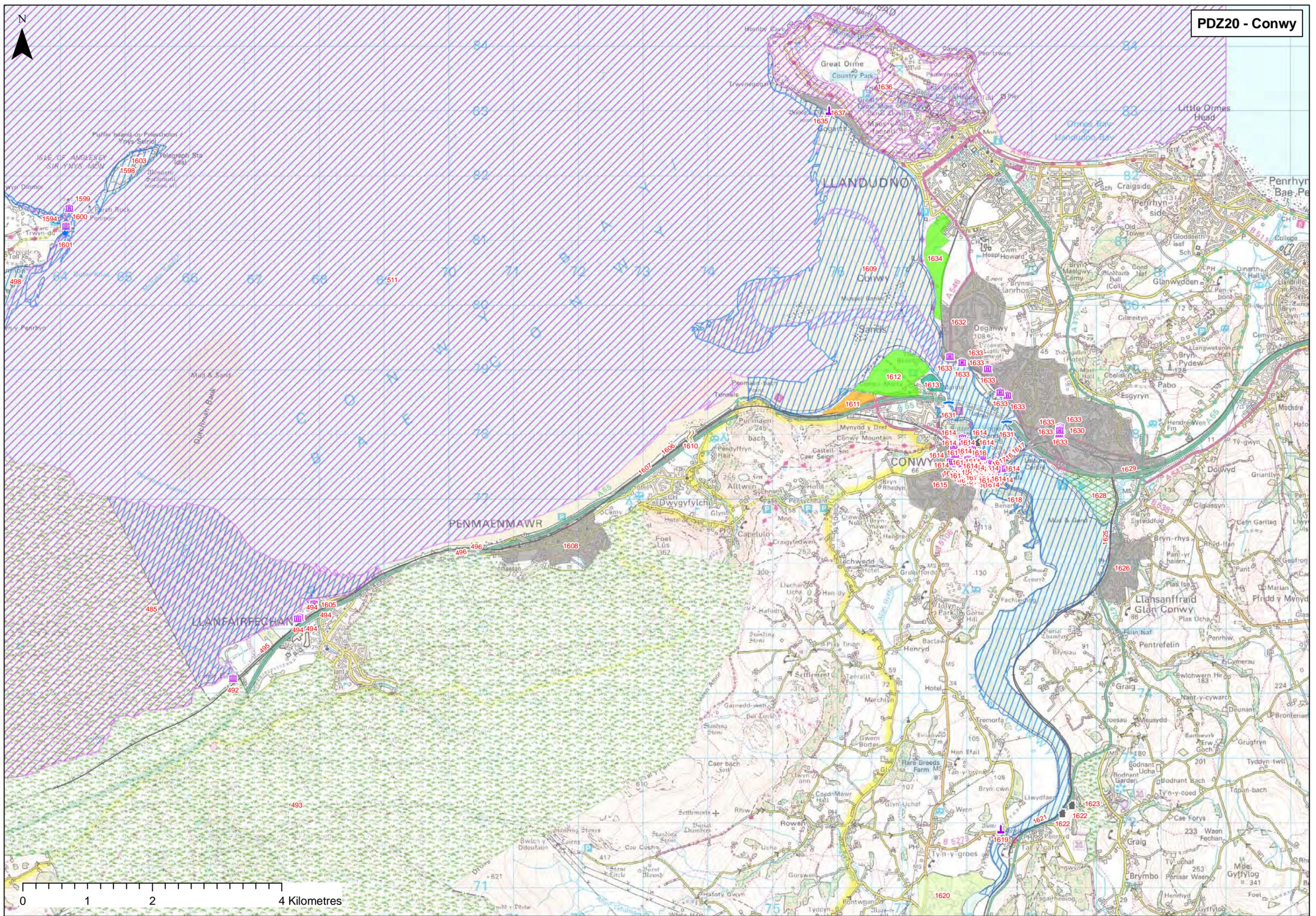


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PDZ20 Conwy - Gerizim to the Great Orme

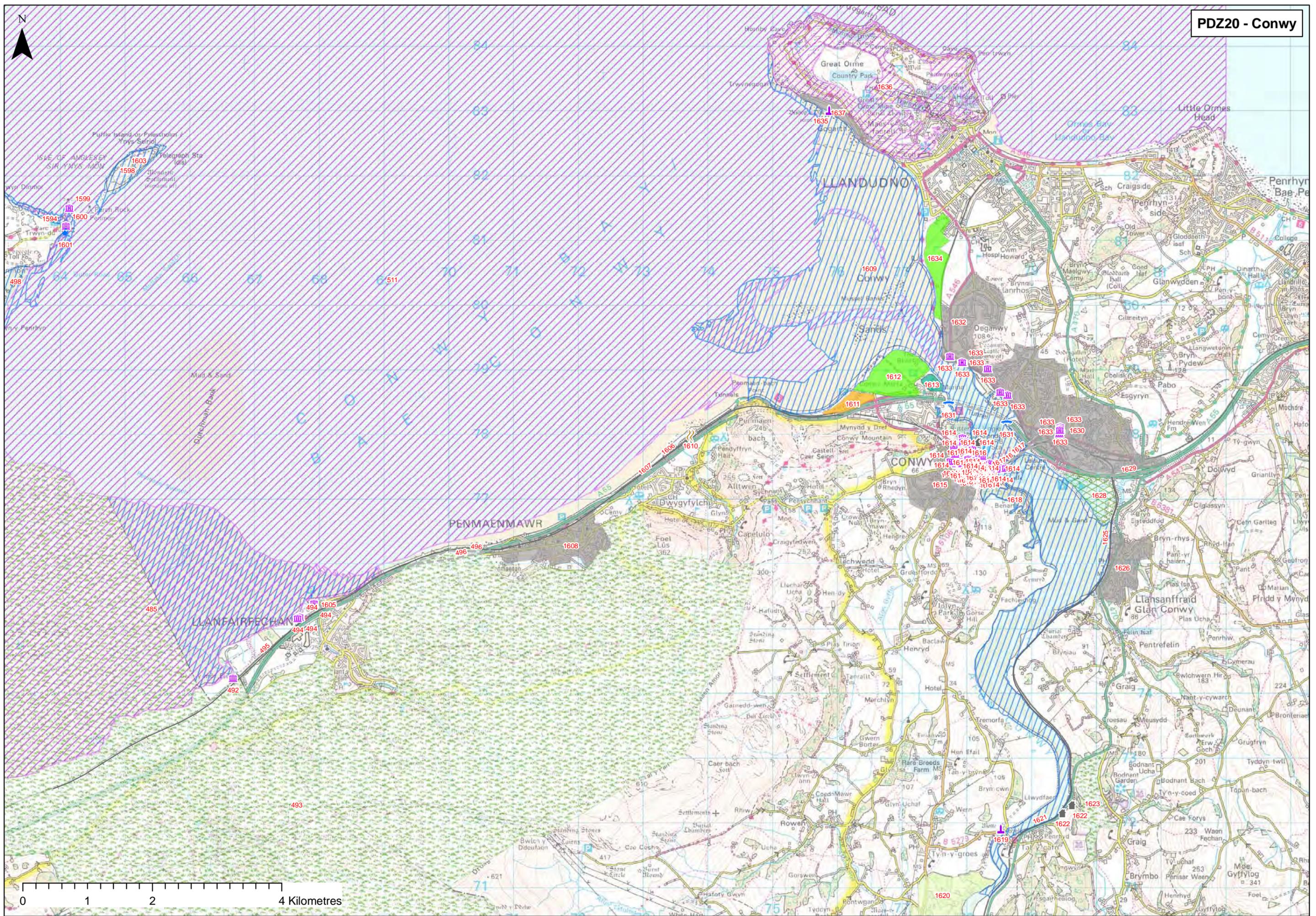
ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is Tis there enough of this benefit	Potential for substitution	Objectives
492	H120	Llanfairfechan	Listed Building	One of two cottages, cadw listed building	Situated close to the sea, may experience issues with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
493	H121	Llanfairfechan	Historic Parks and Gardens	Bryn y Neuadd Historic Park	Situated close to the sea, may experience issues with SLR	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
494	H122	Llanfairfechan	Listed Building	Cadw listed buildings	A few listed buildings situated seaward of the railway line and road, may have issues with coastal erosion, or flooding with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
495	F309	Llanfairfechan	Railway	Railway line	Runs parallel to the coast exetnsive sea walls and terraces have been built to carry the track, maybe at risk of being lost to SLR	Yes	Yes	National rail network, transport links	National	HA	National Community	No	Yes	Maintain main railway line
496	F310	Llanfairfechan	Coastal Road	A55 Chester to Bangor expressway	Constructed in the 1980s on seaward side of the railway in places, at risk of being lost to coastal erosion and SLR	Yes	Yes	Access	Regional	HA	Regional Community	No	Yes	Maintain access
1598	E061	Puffin Island	SPA, SAC, SSSI	Puffin Island SPA, SAC, SSSI	Protected species, may have habitat loss problems on this small island in the future	Yes	Yes	International and national nature conservation interest (ecology / habitat)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SPA, SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
1599	H131	Trwyn Du Lighthouse	Listed Building	Anglesey LB, lighthouse, situated in the strait between Black point and puffin island	May be an issue with SLR	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
1600	H130	Penmon Point	Listed Building	Anglesey LB lighthouse keepers houses	Situated on the headland of Penmon point, these buildings may be impacted by cliff erosion in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
1601	F338	Penmon Point	Lifeboat/ Lifeguard Station	Coastguard station	Located very close to the shore, may experience flooding issues, however situated on higher ground	Yes	Yes	Rescue service for area.	Local	HA	Local Community	No	Yes	Maintain function of Coastguard station
1603	E060	Porth Penmon	SSSI	Arfordir Gogleddol Penmon SSSI	Along the edge of the coastline, a thin narrow SSSI, may be lost due to SRL. Changes to natural coastal processes essential for the integrity of the interest features (e.g. erosion)	Yes	Yes	National nature conservation interest - Geological, botanical, ornithological and marine biological features	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1605	F311	Llanfairfechan	Properties	Properties	Residences are low lying and at risk to future flooding, even though protected by sea walls and beach is protected with groynes	Yes	Yes	Dwellings	Regional	HA	Regional Community	No	No	Prevent loss of properties due to flooding
1606	F312	Penmaenmawr	Railway	Railway line	Runs parallel to the coast exetnsive sea walls and terraces have been built to carry the track, maybe at risk of being lost to SLR	Yes	Yes	National rail network, transport links	National	HA	National Community	No	Yes	Maintain main railway line
1607	F313	Penmaenmawr	Coastal Road	A55 Chester to Bangor expressway	Constructed in the 1980s on seaward side of the railway in places, at risk of being lost to coastal erosion and SLR	Yes	Yes	Access	Regional	HA	Regional Community	No	Yes	Maintain access
1608	F314	Penmaenmawr	Properties	Properties	Residences are low lying and at risk to future flooding, even though protected by sea walls and beach is protected with groynes	Yes	Yes	Dwellings	Regional	HA	Regional Community	No	No	Prevent loss of properties due to flooding
1609	E058	Afon Conwy	SSSI	Aber Afon Conwy SSSI	The habitats along the River Conwy may be lost or impacted by SLR	Yes	Yes	National nature conservation interest (ecology including marine and terrestrial invertebrate biology)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1610	F316	Dwygyfylchi	Sewage Works	Sewage works	Seaward of the railway line and coastal road, at risk of being lost to SLR	Yes	Yes	Sewage treatment for Conwy	Regional	HA	Regional Community	No	Yes	Maintain function of sewage plant
1611	F317	Conwy	Caravan/Holiday Park/Camp Site	Caravan site	Located within the morfa conwy dunes, likely to be lost as the shoreline rolls back	Yes	Yes	Tourism and recreation	Local	R	Local Community	No	Yes	Maintain function of caravan and camping park
1612	F318	Conwy	Golf Course	Golf Course	Low lying golf course situated on the notuh of the conwy estuary	Yes	Yes	Tourism and recreation	Local	R	Local Community	No	Yes	Maintain function of golfcourse
1613	F319	Conwy	Harbour / Marina	Marina	At risk of being flooded/lost due to SLR hard structures such as quay walls are holding the estuary mouth in place	Yes	Yes	Tourism and recreation	Local	R	Local Community	No	Yes	Prevent loss of marina
1614	H123	Conwy	Listed Building	Various listed buildings, Historic Park, Castle, SAM and essential settings	Conwy is a built up town, with many historic features, will suffer issues in the future and SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
1615	F316a	Conwy	Properties	Properties	Some properties for Conwy, residential and commercial may be at risk with SLR	Yes	Yes	Dwellings, commercial	Regional	HA/C	Regional Community	No	No	To maintian the character of Conwy, and to protect properties
1616	F320	Afon Conwy	Properties	Conwy Harbour, floating pontoons	Large harbour, used for recreational boating, at risk of possibly being lost if river migrates or water levels rise	Yes	Yes	Tourism and recreation	Local	R	Local Community	No	Yes	Prevent loss of harbour
1617	F321	Afon Conwy	Coastal Road	Three bridges crossing river	Low lying bridges, could suffer issues if water levels rise, sat on an embankment out into the river	Yes	Yes	Access, carry rail traffic and vehicles across the Conwy river	National	HA	National Community	No	No	Maintain access
1618	F322/ E059	Conwy	SSSI	Benarth Wood SSSI	Close to the river bank, this designation may be impacted with SLR	Yes	Yes	National nature conservation interest (ecology / habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1619	H124	Ty'n y groes	SAM	Bryn Castell SAM	Situated on the edge of the Conwy river, may have issues with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
1620	H125	Canovivm Roman Fort	SAM	SAM, Historic Park and Garden and Listed building	located to the west of the river conwy, sme of this land may be lost with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
1621	F323	Tal y Cafn	Railway	Road and railway line	Situated very close to the edge of the riverbank, at risk if water levels rise	Yes	Yes	Transport links, national rail network	National	HA	National Community	No	No	Maintain access road and railway line
1622	F324	Afon Conwy	Properties	Properties	Proerties located close to the river are at risk of experiencing flooding in the future, if they don't already	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR and maintain the character of the area
1623	H126	Bodnant Garden	Historic Parks and Gardens	Historic Garden	located to the east of the river conwy, some of this land may be lost with SLR	Yes	Yes	Historic Parks and Gardens	Regional	H	Regional Community	No	No	To prevent disturbance to the interest feature and character
1624	F325	Morfa uchaf, Dyffryn Conwy	SSSI	SSSI	Close to the river bank, this designation may be impacted with SLR.	Yes	Yes	National nature conservation interest (ecology / habitat)	National	E	National Community	No	No	To maintain or enhance the condition or integrity of the SSSI and interest features within the context of a dynamic coastal system
1625	F326	Llansanffraid Glan Conwy	Railway	Railway line	Situated very close to the edge of the riverbank, at risk if water levels rise	Yes	Yes	Transport links, national rail network	National	HA	National Community	No	No	Maintain railway line



4 Kilometres

PDZ20 Conwy - Gerizim to the Great Orme

ID		Location	Type	Feature	Issue associated with feature	FCD Issue	Affect Policy	Benefits/Why is issue important	Scale	Issue Type/ Theme	Who are the beneficiaries	Is this enough of this benefit	Potential for substitution	Objectives
1626	F327	Llansanffraid Glan Conwy	Properties	Properties	On edge of river bank, at great risk if water levels rise	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR and maintain the character of the area
1627	H127	Conwy river	Listed Building	BrynEisteddfod LB	Situated to the south of Llandudno, north of llansanffraid, on the conwy river, with Sea level rise this feature may suffer some loss	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
1628	F328	Glan Conwy	National Nature Reserve	Nature Reserve	At risk of loss due to sea level rise	Yes	Yes	National Nature Reserve	National	E	National Community	No	No	To maintain the conservation amenity and educational benefits of the NNR
1629	F329	Llandudno	Coastal Road	A55 Chester to Bangor expressway	South of Llandudno, very close to river	Yes	Yes	Access road	National	HA	National Community	No	No	Maintain access
1630	F330	Llandudno	Properties	Llandudno Town	Large town situated on the eastern side of the Afon Conwy, many properties roads and amenities at risk of tidal flooding if water levels rise	Yes	Yes	Large settlement	Regional	HA	Regional Community	No	No	Prevent loss of properties due to SLR
1631	F331	Afon Conwy	Coastal Road	Conwy tunnel entrances	This tunnel is buried underneath the Conwy river, the entrances to the tunnel are low lying, defended only by a small embankment on the Llandudno side, if water levels rose there is a good chance this tunnel will flood	Yes	Yes	Access road	National	HA	National Community	No	Yes	Maintain access to Holy island
1632	F332	Deganwy	Properties	Deganwy town properties	Properties situated close to the river at risk of flooding due to sea level rise	Yes	Yes	Large settlement	Regional	HA	Regional Community	No	No	Prevent loss of properties due to SLR
1633	H128	Deganwy	Listed Building	Various Listed buildings	along the river conwy, landward of the coastal road, may be at risk in the future	Yes	Yes	Listed Buildings	National	H	National Community	No	No	To prevent disturbance or deterioration to the structure and it's setting and to maintain access
1634	F333	Deganwy	Golf Course	Golf Course	golf course on the edge of the mouth of the estuary, may suffer flooding in the futuer	Yes	Yes	Tourism and recreation	Local	R	Local Community	No	Yes	Maintain golfing facilities
1635	H129	Gogarth	SAM	Gogarth Grange SAM	gogarth grange is situated to the north of conwy sands, on the great orme peninsular, this site may be lost to coastla recession or flooded with SLR	Yes	Yes	Scheduled Monument (historical)	National	H	National Community	No	No	To prevent disturbance or deterioration to the site and it's setting
1636	F334	Great Orme	cSAC, SSSI	cSAC and SSSI	Changes to natural coastal processes essential for the integrity of the interest features and impacts of SLR	Yes	Yes	International and national nature conservation interest (ecology / habitat and geology)	International and National	E	International and National Community	No	No	To maintain or enhance the condition or integrity of the international (SAC) and national (SSSI) designated sites and interest features within the context of a dynamic coastal system
1637	F335	Great Orme	Properties	Coastal Properties	Properties are at risk of becoming flooded due to SLR	Yes	Yes	Dwellings	Local	HA	Local Community	No	No	Prevent loss of properties due to SLR



4 Kilometres

APPENDIX C INTERNATIONAL NATURE CONSERVATION SITE DETAILS

International Designated Sites of the West of Wales SMP2 Study Area (1km Coastal Boundary Layer)

International Designation	Site Name	Description of interest	Area (Ha)
Special Areas of Conservation			
SAC	Dee Estuary	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide • <i>Salicornia</i> and other annuals colonising mud and sand • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Estuaries • Annual vegetation of drift lines • Vegetated sea cliffs of the Atlantic and Baltic coasts • Embryonic shifting dunes • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') • Fixed dunes with herbaceous vegetation ('grey dunes') * Priority feature • Humid dune slacks <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> • Sea lamprey <i>Petromyzon marinus</i> • River lamprey <i>Lampetra fluviatilis</i> • Petalwort <i>Petalophyllum ralfsii</i> 	15805
SAC	River Dee and Bala Lake	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Atlantic salmon <i>Salmo salar</i> • Floating water-plantain <i>Luronium natans</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> • Sea lamprey <i>Petromyzon marinus</i> • Brook lamprey <i>Lampetra planeri</i> • River lamprey <i>Lampetra fluviatilis</i> • Bullhead <i>Cottus gobio</i> • Otter <i>Lutra lutra</i> 	1308

International Designation	Site Name	Description of interest	Area (Ha)
SAC	Afon Eden	<p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Active raised bogs * Priority feature <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Freshwater pearl mussel <i>Margaritifera margaritifera</i> Floating water-plantain <i>Luronium natans</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> Sea lamprey <i>Petromyzon marinus</i> Otter <i>Lutra lutra</i> 	284
SAC	Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Sandbanks which are slightly covered by sea water all the time Mudflats and sandflats not covered by seawater at low tide Reefs <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Large shallow inlets and bays Submerged or partially submerged sea caves 	26483
SAC	Afonydd Cleddau/ Cleddau Rivers	<p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation Active raised bogs * Priority feature Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) * Priority feature <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Brook lamprey <i>Lampetra planeri</i> River lamprey <i>Lampetra fluviatilis</i> Bullhead <i>Cottus gobio</i> Otter <i>Lutra lutra</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> Sea lamprey <i>Petromyzon marinus</i> 	751

International Designation	Site Name	Description of interest	Area (Ha)
SAC	Afon Gwyrfai a Llyn Cwellyn	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the Isoëto-Nanojuncetea: Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Atlantic salmon <i>Salmo salar</i>: Floating water-plantain <i>Luronium natans</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> Otter <i>Lutra lutra</i> 	114
SAC	Afon Teifi/ River Teifi	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the Isoëto-Nanojuncetea <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Brook lamprey <i>Lampetra planeri</i> River lamprey <i>Lampetra fluviatilis</i> Atlantic salmon <i>Salmo salar</i> Bullhead <i>Cottus gobio</i> Otter <i>Lutra lutra</i> Floating water-plantain <i>Luronium natans</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> Sea lamprey <i>Petromyzon marinus</i> 	716
SAC	Cardigan Bay/ Bae Ceredigion	<p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Sandbanks which are slightly covered by sea water all the time Reefs Submerged or partially submerged sea caves <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Bottlenose dolphin <i>Tursiops truncatus</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> Sea lamprey <i>Petromyzon marinus</i> River lamprey <i>Lampetra fluviatilis</i> Grey seal <i>Halichoerus grypus</i> 	95860

International Designation	Site Name	Description of interest	Area (Ha)
SAC	Clogwyni Pen Llyn/ Seacliffs of Lleyn	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Vegetated sea cliffs of the Atlantic and Baltic coasts 	1048
SAC	Pembrokeshire Marine/ Sir Benfro Forol	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Estuaries • Large shallow inlets and bays • Reefs <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Sandbanks which are slightly covered by sea water all the time • Mudflats and sandflats not covered by seawater at low tide • Coastal lagoons * Priority feature • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) • Submerged or partially submerged sea caves <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Grey seal <i>Halichoerus grypus</i> • Shore dock <i>Rumex rupestris</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> • Sea lamprey <i>Petromyzon marinus</i> • River lamprey <i>Lampetra fluviatilis</i> • Allis shad <i>Alosa alosa</i> • Twaite shad <i>Alosa fallax</i> • Otter <i>Lutra lutra</i> 	138069
SAC	Bae Cemlyn/ Cemlyn Bay	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Coastal lagoons * Priority feature <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Perennial vegetation of stony banks 	43

International Designation	Site Name	Description of interest	Area (Ha)
SAC	Carmarthen Bay Dunes/ Twyni Bae Caerfyrddin	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Embryonic shifting dunes Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (`white dunes`) Fixed dunes with herbaceous vegetation (`grey dunes`) * Priority feature - Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) Humid dune slacks <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Narrow-mouthed whorl snail <i>Vertigo angustior</i> Petalwort <i>Petalophyllum ralfsi</i> Fen orchid <i>Liparis loeselii</i> 	1206
SAC	Coedwigoedd Penrhyn Creuddyn/ Creuddyn Peninsula Woods	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Tilio-Acerion forests of slopes, screes and ravines * Priority feature <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) <i>Taxus baccata</i> woods of the British Isles * Priority feature 	119
SAC	Cors Fochno	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Active raised bogs: * Priority feature Degraded raised bogs still capable of natural regeneration <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Depressions on peat substrates of the <i>Rhynchosporion</i> 	653
SAC	Glan-traeth	<p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Great crested newt <i>Triturus cristatus</i> 	14
SAC	Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Salicornia and other annuals colonising mud and sand Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Estuaries Mudflats and sandflats not covered by seawater at low tide 	1058
SAC	Glannau Ynys Gybi/ Holy Island Coast	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> Vegetated sea cliffs of the Atlantic and Baltic coasts European dry heaths <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> Northern Atlantic wet heaths with <i>Erica tetralix</i> 	464

International Designation	Site Name	Description of interest	Area (Ha)
SAC	Great Orme's Head/ Pen y Gogarth	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • European dry heaths • Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Vegetated sea cliffs of the Atlantic and Baltic coasts 	303
SAC	Limestone Coast of South West Wales/ Arfordir Calchfaen de Orllewin Cymru	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Vegetated sea cliffs of the Atlantic and Baltic coasts • Fixed dunes with herbaceous vegetation (‘grey dunes’): * Priority feature <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • European dry heaths • Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) • Caves not open to the public • Submerged or partially submerged sea caves <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> • Early gentian <i>Gentianella anglica</i> <p>Annex II species present as a qualifying feature, but not a primary reason</p> <ul style="list-style-type: none"> • Petalwort <i>Petalophyllum ralfsii</i> 	1595
SAC	Llyn Dinam	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>-type vegetation 	37
SAC	Morfa Harlech a Morfa Dyffryn	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Embryonic shifting dunes • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (‘white dunes’) • Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) • Humid dune slacks <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Petalwort <i>Petalophyllum ralfsii</i> 	1063
SAC	Pembrokeshire Bat Sites and Bosherton Lakes/ Safleoedd Ystlum Sir Benfro a Llynno	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> • Lesser horseshoe bat <i>Rhinolophus hipposideros</i> • Otter <i>Lutra lutra</i> 	122

International Designation	Site Name	Description of interest	Area (Ha)
SAC	St David`s / Ty Ddewi	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Vegetated sea cliffs of the Atlantic and Baltic coasts • European dry heaths <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Floating water-plantain <i>Luronium natans</i> 	935
SAC	Y Twyni o Abermenai i Aberffraw/ Abermenai to Aberffraw Dunes	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Embryonic shifting dunes • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (`white dunes`) • Fixed dunes with herbaceous vegetation (`grey dunes`) * Priority feature • Dunes with <i>Salix repens ssp. argentea</i> (<i>Salicion arenariae</i>) • Humid dune slacks <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Petalwort <i>Petalophyllum ralfsii</i> • Shore dock <i>Rumex rupestris</i> 	1871
SAC	Coedydd Aber	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) * Priority feature 	346
SAC	Corsydd Llyn/ Lleyn Fens	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Alkaline fens <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> * Priority feature <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Desmoulin`s whorl snail <i>Vertigo moulinsiana</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> • Geyer`s whorl snail <i>Vertigo geyeri</i> 	284

International Designation	Site Name	Description of interest	Area (Ha)
SAC	North West Pembrokeshire Commons/ Comins Gogledd Orllewin Sir Benfro	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • European dry heaths • Transition mires and quaking bogs <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Northern Atlantic wet heaths with <i>Erica tetralix</i> • Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>) <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Floating water-plantain <i>Luronium natans</i> 	289
SAC	Pen Llyn a`r Sarnau/ Lley Peninsula and the Sarnau	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Sandbanks which are slightly covered by sea water all the time • Estuaries • Coastal lagoons * Priority feature • Large shallow inlets and bays • Reefs <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide • Salicornia and other annuals colonising mud and sand • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) • Submerged or partially submerged sea caves: <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> • Bottlenose dolphin <i>Tursiops truncatus</i> • Otter <i>Lutra lutra</i> • Grey seal <i>Halichoerus grypus</i> 	146023

International Designation	Site Name	Description of interest	Area (Ha)
SAC	Carmarthen Bay and Estuaries/ Bae Caerfyrddin ac Aberoedd	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Sandbanks which are slightly covered by sea water all the time • Estuaries • Mudflats and sandflats not covered by seawater at low tide • Large shallow inlets and bays • Salicornia and other annuals colonising mud and sand • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Twaite shad <i>Alosa fallax</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <ul style="list-style-type: none"> • Sea lamprey <i>Petromyzon marinus</i> • River lamprey <i>Lampetra fluviatilis</i> • Allis shad <i>Alosa alosa</i> • Otter <i>Lutra lutra</i> 	66101
SAC	Glynllifon	<p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Lesser horseshoe bat <i>Rhinolophus hipposide</i> 	189
SAC	Coedydd Derw a Safleoedd Ystumod Meirion/ Meirionnydd Oakwoods and Bat Sites	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) * Priority feature <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation • Northern Atlantic wet heaths with <i>Erica tetralix</i>: • European dry heaths • Tilio-Acerion forests of slopes, screes and ravines * Priority feature • Bog woodland: * Priority feature <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Lesser horseshoe bat <i>Rhinolophus hipposideros</i> 	2814

International Designation	Site Name	Description of interest	Area (Ha)
Special Protection Areas			
SPA	Bae Caerfyrddin / Carmarthen Bay	<p>Article 4.2 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> Common scoter <i>Melanitta nigra</i>, (Western Siberia/Western & Northern Europe/North-western Africa) 1.0% of the wintering population 5 year peak mean 1997/98 - 2001/02 	33410
SPA	Burry Inlet	<p>Article 4.2 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> Oystercatcher <i>Haematopus ostralegus</i> 1.5% of the wintering Europe & Northern/Western Africa population (5 year peak mean 1991/2 - 1995/6) Pintail <i>Anas acuta</i> 3.0% of the wintering Europe & Northern/Western Africa population (5 year peak mean 1991/2 - 1995/6) <p>Assemblage qualification: A wetland of international importance.</p> <p>The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl. Over winter, the area regularly supports 34,962 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Curlew <i>Numenius arquata</i>, Black-tailed Godwit <i>Limosa limosa islandica</i>, Dunlin <i>Calidris alpina alpina</i>, Knot <i>Calidris canutus</i>, Shoveler <i>Anas clypeata</i>, Shelduck <i>Tadorna tadorna</i>, Oystercatcher <i>Haematopus ostralegus</i>, Pintail <i>Anas acuta</i>, Whimbrel <i>Numenius phaeopus</i>.</p>	6628
SPA	Dee Estuary	This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting numerous bird populations of European importance listed on Annex I of the Directive and under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl. More information can be obtained from http://www.jncc.gov.uk .	13076
SPA	Grassholm	<p>Article 4.2 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> Gannet <i>Morus bassanus</i> 12.5% of the North Atlantic population (Count as at 1994/5) 	10
SPA	Castlemartin Coast	<p>Article 4.1 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> Chough <i>Pyrrhocorax pyrrhocorax</i> 3.5% of the GB breeding population (Count as at 1998) Chough <i>Pyrrhocorax pyrrhocorax</i>, 3.5% of the wintering population in Great Britain (Count as at 1998) 	1122
SPA	Dyfi Estuary / Aber Dyfi	<p>Article 4.1 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> Greenland white-fronted goose <i>Anser albifrons flavirostris</i> (Greenland /Ireland /UK) 1% of the wintering population in Great Britain 5 year peak mean for 1993/94 - 1997/98 	Area to be confirmed upon site classification

International Designation	Site Name	Description of interest	Area (Ha)
SPA	Glannau Aberdaron and Ynys Enlli / Aberdaron Coast and Bardsey Island	<p>Article 4.1 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> • Chough <i>Pyrrhonorax pyrrhonorax</i> 3.5% of the GB breeding population (Count, as at late 1990s) • Chough <i>Pyrrhonorax pyrrhonorax</i>, 3.5% of the wintering population in Great Britain (RSPB) <p>Article 4.2 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> • Manx shearwater <i>Puffinus puffinus</i> 3.2% of the population in Great Britain during breeding season (Count, as at 1996) 	505
SPA	Glannau Ynys Gybi / Holy Island Coast	<p>Article 4.1 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> • Chough <i>Pyrrhonorax pyrrhonorax</i> 6.4% of the GB breeding population (Count: RSPB 2001) • Chough <i>Pyrrhonorax pyrrhonorax</i> 7% of the GB wintering population (Count: RSPB 2001) 	353
SPA	Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal	<p>Article 4.1 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> • Chough <i>Pyrrhonorax pyrrhonorax</i> at least 2.6% of the wintering population in Great Britain (RSPB 2000) • Chough <i>Pyrrhonorax pyrrhonorax</i> at least 2.6% of the GB breeding population (RSPB 2000) 	372
SPA	Ramsey and St David's Peninsula Coast	<p>Article 4.1 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> • Chough <i>Pyrrhonorax pyrrhonorax</i> at least 3.2% of the GB breeding population (No count period specified) 	846
SPA	Skokholm and Skomer	<p>Article 4.1 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> • Chough <i>Pyrrhonorax pyrrhonorax</i> at least 1.2% of the breeding population in Great Britain • Short-eared Owl <i>Asio flammeus</i> at least 0.6% of the breeding population in Great Britain (Count as at 1998) • Storm Petrel <i>Hydrobates pelagicus</i> at least 4.1% of the breeding population in Great Britain (Count as at 1995) <p>Article 4.2 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> • Lesser Black-backed Gull <i>Larus fuscus</i> at least 16.4% of the breeding Western Europe /Mediterranean /Western Africa population (Mean 1993 to 1997) • Manx Shearwater <i>Puffinus puffinus</i> at least 56.9% of the breeding population (Count, as at late 1990s) • Puffin <i>Fratercula arctica</i>, 9,500 pairs representing at least 1.1% of the breeding population (Count, as at mid-1980s) <p>Assemblage qualification: A seabird assemblage of international importance</p> <p>During the breeding season, the area regularly supports 67,278 individual seabirds (Count period ongoing) including: Razorbill <i>Alca torda</i>, Guillemot <i>Uria aalge</i>, Kittiwake <i>Rissa tridactyla</i>, Puffin <i>Fratercula arctica</i>, Lesser Black-backed Gull <i>Larus fuscus</i>, Manx Shearwater <i>Puffinus puffinus</i>, Storm Petrel <i>Hydrobates pelagicus</i>.</p>	428

International Designation	Site Name	Description of interest	Area (Ha)
SPA	Traeth Lafan / Lavan Sands, Conway Bay	<p>Article 4.2 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> Oystercatcher <i>Haematopus ostralegus</i> (Europe & Northern/Western Africa) 1.4% of the wintering population in Great Britain 5 year peak mean 1991/92-1995/96 Oystercatcher <i>Numenius arquata</i> (Europe - breeding) 1.1% of the wintering population in Great Britain 5 year peak mean 1991/92-1995/96 <p>On passage the area regularly supports:</p> <ul style="list-style-type: none"> Great-crested grebe <i>Podiceps cristatus</i> (North-western Europe - wintering) Unknown % of the population in Great Britain (No count period specified) 	2643
SPA	Ynys Feurig, Cemlyn Bay and The Skerries	<p>Article 4.1 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> Roseate Tern <i>Sterna dougallii</i> (Europe - breeding) 4.7% of the GB breeding population 5 year mean, 1992-1996 Common Tern <i>Sterna hirundo</i> (Northern/Eastern Europe - breeding) at least 1.5% of the GB breeding population 5 year mean, 1992-1996 Arctic Tern <i>Sterna paradisaea</i> (Arctic - breeding/Southern Oceans - wintering) at least 2.9% of the GB breeding population 5 year mean, 1992-1996 Sandwich Tern <i>Sterna sandvicensis</i> (Western Europe/Western Africa) 3.3% of the GB breeding population 5 year mean, 1993-1997 	86
SPA	Ynys Seiriol / Puffin Island	<p>Article 4.2 Qualification (79/409/EEC)</p> <ul style="list-style-type: none"> Cormorant <i>Phalacrocorax carbo</i> (North-western Europe) 1.35% of the breeding population 5 year mean for 1996 - 2000 	Area to be confirmed upon site classification
pSPA	Liverpool Bay / Bae Lerpwl	<p>Interest feature 1: Internationally important population of regularly occurring Annex 1 species: Red-throated diver (<i>Gavia stellata</i>)</p> <p>Interest feature 2: Internationally important population of regularly occurring migratory species: Common scoter (<i>Melanitta nigra</i>).</p> <p>Interest feature 3: Area being used by over 20,000 waterfowl or 20,000 seabirds in any season.</p>	170226

International Designation	Site Name	Description of interest	Area (Ha)
Ramsar Sites			
<i>Ramsar</i>	Cors Fochno and Dyfi	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Active raised bogs * Priority feature • Degraded raised bogs still capable of natural regeneration <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Depressions on peat substrates of the <i>Rhynchosporion</i> 	653
<i>Ramsar</i>	Angelsey and Llyn Fens	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Alkaline fens <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> * Priority feature <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Desmoulin`s whorl snail <i>Vertigo moulinsiana</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection</p> <p>Geyer`s whorl snail <i>Vertigo geyeri</i></p>	467
<i>Ramsar</i>	Dee Estuary	This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting numerous bird populations of European importance listed on Annex I of the Directive and under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl. More information can be obtained from http://www.jncc.gov.uk .	13076

Source: Information on international designations based on *Natura 2000* Data Forms and web descriptions – www.jncc.gov.uk

APPENDIX D SSSI SITE CHARACTERISTICS FOR THE WEST OF WALES

Appendix D - SSSI sites with key biological features in close proximity to the coast

SSSI Site Name	Condition	Issue	Hectares (Ha)	Unit Id	Feature Status In Unit KS = Key Species, KH = Key Habitat	Key Species & Habitat Feature Descriptions	English Description
Aber Afon Conwy	Unfavourable	Bait collection, Cutting/ Mowing – insufficient; Hand gathering of fish / shellfish; Marine - non-native; Molluscan farming and assoc. structures; and Mooring	1301	1765	KH	Estuaries	
				5348	KS	Lycia zonaria	Belted Beauty
				1765	KH	Mudflats and sandflats not covered by seawater at low tide	
				5344	KH	Soft piddock bored substrata	
Aber Geirch	Unfavourable	Cutting/ Mowing – insufficient; Grazing insufficient grazing; Grazing overgrazing;	18	1691	KH	Alkaline fens	
				1691	KH	Flush and spring -soligenous mire-	
Aber Mawddach/Mawddach Estuary	Unfavourable	No information available	1351	2396	KH	Atlantic salt meadows -Glauco-Puccinellietalia maritimae-	
				2396	KH	Estuaries	
				2396	KS	Lutra lutra	Otter
				2396	KH	Mudflats and sandflats not covered by seawater at low tide	
				1559	KH	Old sessile oak woods with Ilex and Blechnum in the British Isles	
				2398	KH	Salicornia and other annuals colonising mud and sand	
Aber Taf / Taf Estuary	Favourable	Grazing overgrazing	1500	5716	KH	Atlantic salt meadows -Glauco-Puccinellietalia maritimae-	
				5687	KH	Estuaries	
				5687	KH	Mudflats and sandflats not covered by seawater at low tide	
				5687	KH	Salicornia and other annuals colonising mud and sand	
				5687	KH	Salt-marsh	
Aberarth - Carreg Wylan	Unfavourable	Cutting/ Mowing – insufficient; Grazing insufficient grazing; Grazing type and/or timing Marine - non-native; Public access - erosion/disturbance; Scrub invasion Scrub invasion; Terrestrial - non-native; and Waste impacts - dumping spoil, sludge, etc	997	3783	KH	Acid grassland	
				3770	KS	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				3788	KS	Boloria euphrosyne	Pearl-bordered Fritillary
				3787	KH	Calcareous grassland	
				3758	KH	Caves and overhangs	
				3764	KS	Chrysolina sanguinolenta	Toadflax Leaf Beetle
				3759	KH	Coastal grassland	
				3787	KS	Coastal invertebrate assemblage	Coastal invertebrate assemblage
				3758	KS	Halichoerus grypus	Grey Seal
				3795	KS	Hypochaeris glabra	Smooth Cat's-ear
				3758	KS	Larus fuscus	Lesser Black-backed Gull
				3776	KH	Maritime cliff & associated ledges & crevices	
				3759	KS	Pyrrhocorax pyrrhocorax- breeding	Chough- breeding
				3760	KS	Pyrrhocorax pyrrhocorax- non-breeding	Chough- non-breeding
				3778	KH	Rockpools	
Afon Cleddau Dwyreiniol/Eastern Cleddau River	Unfavourable	Terrestrial - native and archaeophyte; Terrestrial - non-native; Water abstraction; and Water pollution - diffuse sources	354	1025	KH	Alluvial forests with Alnus glutinosa and Fraxinus excelsior -Alno-Padion, Alnion incanae, Salicion	
				1017	KS	Lampetra planeri	Brook Lamprey
				1017	KS	Lutra lutra	Otter
				1020	KH	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion	
Afon Cleddau Gorllewinol/Western Cleddau River	Unfavourable	Grazing type and/or timing; Terrestrial - non-native; Water abstraction; Water pollution - diffuse sources; and Water pollution - discharge(s)	372	1013	KH	Alluvial forests with Alnus glutinosa and Fraxinus excelsior -Alno-Padion, Alnion incanae, Salicion	
				1009	KS	Lampetra planeri	Brook Lamprey
				1009	KS	Lutra lutra	Otter
				1009	KH	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion	
Afon Gwyrfa A Llyn Cwellyn	Unfavourable	Ditch management; and Terrestrial - non	326		KH	Running water	
					KH	Standing water	
Afon Teifi	Unfavourable	Drainage; Freshwater fisheries management; Grazing insufficient grazing; Terrestrial - non-native; Water abstraction; Water pollution - diffuse sources; Water pollution - discharge(s); and Weirs and other in-channel structures	778	1553	KS	Cettia cetti	Cetti's Warbler
				1554	KS	Cryphaea lamyana	Multi-fruited River Moss
				1556	KS	Luronium natans	
				2983	KH	Lutra lutra	Otter
				1553	KH	Marshy grassland	
				1612	KH	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of	
				1553	KS	Petromyzon marinus	Sea lamprey
				1553	KH	Running water	
				2983	KH	Salmo salar	Atlantic salmon
				1553	KH	Semi-natural woodland	
Allt Wen a Traeth Tanybwllch	Favourable	Coastal processes and sediment supply; and Terrestrial - native and archaeophyte	36	5119	KS	Pectenogammarus planicrurus	an amphipod
				5026	KH	Sand influenced biogenic reefs	
				5027	KH	Shingle/boulders above high water mark	

SSSI Site Name	Condition	Issue	Hectares (Ha)	Unit Id	Feature Status In Unit KS = Key Species, KH = Key Habitat	Key Species & Habitat Feature Descriptions	English Description
Arfordir Abereiddi	Unfavourable	No information available	64	2845	KS	Halichoerus grypus	Grey Seal
Arfordir Cogleddol Penmaen	Unfavourable	No information available	103	2911	KH	Silled saline lagoon	
Arfordir Marros-Pentywyn / Marros-Pendine Coast	Unfavourable	No information available	249	5592	KS	Asplenium obovatum subsp. lanceolatum	Lanceolate Spleenwort
				4489	KH	Coastal geomorphology of Wales	Geomorffoleg arfordirol Cymru
				2874	KH	Large shallow inlets and bays	
				4482	KH	Maritime cliff & associated ledges & crevices	
				2874	KH	Mudflats and sandflats not covered by seawater at low tide	
				5592	KH	Namurian of England and Wales	Namuraidd Lloegr a Chymru
				2874	KH	Quaternary of Wales	Cwaternaidd Cymru
				4491	KH	Semi-natural woodland	
Arfordir Niwglwl - Aberbach / Newgale to Little	Favourable	No information available	206	2882	KS	Adiantum capillus-veneris	Maidenhair Fern
				2882	KH	Rockpools	
Arfordir Penrhyn Angle / Angle Peninsula Coast	Favourable	No information available	134	2846	KS	Pyrrhocorax pyrrhocorax- non-breeding	Chough- non-breeding
Arfordir Saundersfoot - Telpyn / Saundersfoot - Telpyn Coast	Favourable	No information available	152	3144	KH	Rockpools	
Arthog Hall Woods	Unfavourable	Grazing insufficient grazing; and Grazing overgrazing; and Terrestrial - non-native	12		KH	Semi-natural broad-leaved woodland	
Barmouth Hillside	Favourable	Grazing insufficient grazing; Grazing overgrazing; and Terrestrial - non-native	68	1565	KH	Old sessile oak woods with Ilex and Blechnum in the British Isles	
Baron Hill Park	Unfavourable	No information available	112		KS	Lichens	
Beddmanarch-Cymyran	Favourable	Bait collection; Grazing insufficient grazing; Grazing type and/or timing; Molluscan farming and assoc. structures; and Tree felling and management	891	4137	KH	Coastal heath land	
				4140	KS	Eel grass	
				4139	KH	Inter-tidal	
				4143	KS	Juncus capitatus	Dwarf Rush
				4952	KH	Muddy gravel	
				4142	KH	Sheltered mud	
4136	KS	Tringa nubularia	Greenshank				
Beech Cottage, Mynydd-y-Bryn	Favourable	No information available	0	2377	KS	Rhinolophus hipposideros	Lesser horseshoe bat
Benarth Wood	Favourable	No information available	21		KH	Semi-natural broad-leaved woodland	
Borth - Clarach	Favourable	Coastal processes and sediment supply	86	2432	KS	Lutra lutra	Otter
				2432	KH	Moderately exposed rock	
				4616	KS	Pyrrhocorax pyrrhocorax- breeding	Chough- breeding
				4628	KS	Pyrrhocorax pyrrhocorax- non-breeding	Chough- non-breeding
				2432	KH	Reefs	
				2432	KH	Sand influenced biogenic reefs	
Broadwater	Unfavourable	No information available	262	2411	KH	Coastal lagoons*	
				2411	KS	Lutra lutra	Otter
Broomhill Burrows	Favourable	No information available	201	862	KH	"Fixed dunes with herbaceous vegetation - "grey dunes" -"	
				861	KS	Petalophyllum ralfsii	
				861	KS	Pyrrhocorax pyrrhocorax	Chough
				855	KH	Sand-dune	
Bwrdd Arthur	Favourable	No information available	18		KS	Calcareous grassland	
					KH	Dry heath (except coastal)	
Cadnant Dingle	Unfavourable	Energy production – renewables; Terrestrial - non-native; and Tree planting, past and present	18	6152	KH	Semi-natural woodland	
Caeau Crug Bychan, Ty Gwyn a Llwyn Ysgaw	Favourable	No information available	20	3460	KS	Arable	
Cappas Lwyd	Favourable	No information available	7		KH	Marshy grassland	
Carew Castle	Favourable	No information available	4	2376	KS	Rhinolophus ferrumequinum	Greater horseshoe bat
Carn Ingli	Unfavourable	Fire - deliberate or accidental; Grazing insufficient grazing; Grazing type and/or timing; and Terrestrial - native and archaeophyte	430	3191	KH	Dry heath	
				3190	KS	Hammarbya paludosa	Bog Orchid
				3191	KS	Lichen Assemblage: Igneous rocks & block scree	Lichen Assemblage: Igneous rocks & block scree
				3190	KH	Wet heath	
Carreg Y Llam	Favourable	No information available	14		KS	Guillemot	
Castlemartin Cliffs and Dunes	Unfavourable	Military; Public access - erosion/disturbance; Scrub invasion; and Terrestrial - non-native	755	2373	KH	"Fixed dunes with herbaceous vegetation - "grey dunes" -"	
				866	KS	Eurodryas aurinia	Marsh Fritillary
				863	KS	Petalophyllum ralfsii	
				863	KS	Pyrrhocorax pyrrhocorax	Chough
				867	KS	Rhinolophus ferrumequinum	Greater horseshoe bat
Castlemartin Corse	Unfavourable	Coastal flood defence and erosion control (squeeze); Cutting/ Mowing – insufficient;	29	3202	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
				3202	KS	Fen -topogenous mires in valleys, basins and flood plains- Potamogeton coloratus	Fen Pondweed

SSSI Site Name	Condition	Issue	Hectares (Ha)	Unit Id	Feature Status In Unit KS = Key Species, KH = Key Habitat	Key Species & Habitat Feature Descriptions	English Description
Cemlyn Bay	Favourable	Coastal processes and sediment supply; Herbicide/ pesticide use; Pest Control Public access - erosion/disturbance; and Weirs and other in-channel structures	44	428	KH	Coastal grassland	
				430	KH	Coastal lagoons*	
				430	KH	Percolation saline lagoon	
				429	KH	Perennial vegetation of stony banks	
				433	KS	Ruppia cirrhosa	Spiral Tasselweed
				432	KH	Salt-marsh	
				429	KH	Shingle/boulders above high water mark	
				430	KH	Standing water -Brackish-	
				431	KS	Sterna dougallii	Roseate Tern
				431	KS	Sterna hirundo	Common Tern
				431	KS	Sterna paradisaea	Arctic Tern
431	KS	Sterna sandvicensis	Sandwich Tern				
Ceunant Dulyn	Unfavourable	No information available	36		KH	Semi-natural broad-leaved woodland	
Clegir Mawr	Favourable	Grazing type and/or timing; and stock feeding	9	5054	KH	Maritime cliff & associated ledges & crevices	
				5053	KS	Tuberaria guttata	Spotted Rock-rose
Coed Allt Craig Arth	Unfavourable	No information available	57		KH	Semi-natural broad-leaved woodland	
Coed Cwmgwared	Unfavourable	No information available	29		KH	Semi-natural broad-leaved woodland	
Coed Dolgarrog	Favourable	No information available	69		KH	Semi-natural broad-leaved woodland	
Coed Elernion	Favourable	Grazing overgrazing	17	4738	KH	Semi-natural woodland	
Coed Y Gell And Morfa Du	Favourable	No information available	19		KH	Semi-natural broad-leaved woodland	
Coed y Gofer	Favourable	Grazing insufficient grazing	25	3706	KS	Cephalanthera longifolia	Narrow-leaved Helleborine
				3707	KH	Semi-natural woodland	
Coedydd a Chorsydd Aber Teifi (Teifi Estuary)	Unfavourable	No information available	45	4966	KS	Assemblage of RDB and Nationally Scarce lichens	Assemblage of RDB and Nationally Scarce lichens
				4957	KH	Semi-natural woodland	
Coedydd Aber	Unfavourable	Grazing overgrazing; Grazing type and/or timing; Terrestrial - non-native; and Tree	416	2345	KH	Alluvial forests with Alnus glutinosa and Fraxinus excelsior -Alno-Padion, Alnion incanae, Salicion	
				2344	KH	Old sessile oak woods with Ilex and Blechnum in the British Isles	
Coedydd Abergwynant	Unfavourable	Grazing type and/or timing; and Terrestrial non-native	84	1578	KH	Old sessile oak woods with Ilex and Blechnum in the British Isles	
				1578	KH	Tilio-Acerion forests of slopes, screes and ravines*	
Coedydd Afon Menai	Unfavourable	Insufficient tree management; Pest Control; Terrestrial - non-native; Tree	23	5060	KH	Semi-natural woodland	
				5091	KS	Sorbus hibernica	Irish whitebeam
Coedydd Dyffryn Ffestiniog (Gogleddol)	Unfavourable	Grazing insufficient grazing; Grazing overgrazing; Public access -	345	1580	KH	Old sessile oak woods with Ilex and Blechnum in the British Isles	
				1580	KS	Rhinolophus hipposideros	Lesser horseshoe bat
Cors Llyferin	Unfavourable	No information available	33		KH	Fen (topogenous mires in valleys, basins and flood plains)	
Cors Penally (Penally Marsh)	Unfavourable	No information available	10	3120	KS	Cyperus longus	Galingale
				3120	KH	Fen -topogenous mires in valleys, basins and flood plains-	
Craig Ddu - Wharley Point Cliffs	Favourable	No information available	45	4439	KS	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				4439	KH	Coastal grassland	
				4438	KH	Maritime cliff & associated ledges & crevices	
				4437	KH	Semi-natural woodland	
Craig-Y-Don	Unfavourable	No information available	0		KS	spiked speedwell	
Craigyfulfran & Clarach	Favourable	No information available	25	5664	KH	Sand influenced biogenic reefs	
Creigiau Cwm-Ceriw a Ffos-las (Morfa Bychan)	Favourable	No information available	32	5659	KH	Sand influenced biogenic reefs	
Creigiau Pen y graig	Favourable	No information available	23	4395	KS	Phalacrocorax carbo	Cormorant
				4396	KH	Sand influenced biogenic reefs	
				4395	KH	Semi-natural woodland	
Creigiau Rhiwledyn/Little Ormes Head	Unfavourable	Bait collection; Grazing type and/or timing; Hand gathering of fish / shellfish; Public access - erosion/disturbance; and Scrub invasion	36	4428	KH	Assemblage of RDB and Nationally Scarce lichens	Assemblage of RDB and Nationally Scarce lichens
				4429	KH	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				4428	KH	Calcareous grassland	
				4427	KH	Caves and overhangs	
				4428	KH	Maritime cliff & associated ledges & crevices	
				4428	KH	Natural inland rock exposures, screes & upland ledges	
				4429	KH	Phalacrocorax carbo	Cormorant
				2966	KH	Reefs	
				2966	KH	Rockpools	
				4427	KH	Soft piddock bored substrata	
				4427	KH	Under-boulders	
4429	KS	Veronica spicata ssp. hybrida	Spiked Speedwell				
Dale and South Marloes Coast	No information available	No information available	290	4198	KH	Coastal grassland	
				4195	KH	Coastal heath land	
				2841	KS	Halichoerus grypus	Grey Seal
				4194	KH	Maritime cliff & associated ledges & crevices	
				4197	KS	Pseudomogoplistes vicentae	Scaly Cricket
				4192	KS	Pyrrhocorax pyrrhocorax- non-breeding	Chough- non-breeding
				4194	KS	Rumex rupestris	Shore Dock
				4196	KH	Scrub	
De Porth Sain Ffraid / St Bride's Bay South	Unfavourable	No information available	135	4286	KS	Cytisus scoparius subsp. maritimus	Prostrate Broom
				4279	KS	Melittis melissophyllum	Bastard Balm
				4288	KH	Semi-natural woodland	

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Dyfi	Unfavourable	No information available	3795	489	KH	Active raised bogs*	
				2425	KS	Anser albifrons flavirostris	Greenland White-fronted Goose
				2416	KH	Atlantic salt meadows -Glauco-Puccinellietalia maritimae-	
				2427	KS	Breeding bird assemblage of lowland open waters and their margins	Breeding bird assemblage of lowland open waters and their mar
				5765	KS	Breeding bird assemblage of woodland	Breeding bird assemblage of woodland
				2413	KS	Colletes cunicularius	Vernal Bee
				5752	KS	Dactylorhiza purpurella subsp. cambrensis	Northern Marsh-orchid
				490	KH	Degraded raised bogs still capable of natural regeneration	
				489	KH	Depressions on peat substrates of the Rhynchosporion	
				5913	KH	Estuaries	
				2412	KS	Lutra lutra	Otter
				5752	KH	Marshy grassland	
				5910	KH	Mudflats and sandflats not covered by seawater at low tide	
				2413	KH	Other: Strandline vegetation	
				2413	KS	Petalophyllum ralfsii	Petalwort
				489	KH	Raised bog -ombrogenous-	
				2425	KH	Salicornia and other annuals colonising mud and sand	
				2415	KH	Salt-marsh	
				5910	KH	Sand-dune	
				5762	KH	Swamp	
2443	KS	Tringa totanus	Redshank				
5913	KS	Tursiops truncatus	Bottlenose dolphin				
2427	KS	Vanellus vanellus	Lapwing				
Felin Llwyngwair	Favourable	No information available	0		KS	Lesser Horseshoe bat	
Freshwater East Cliffs to Skrinkle Haven	Unfavourable	Grazing insufficient grazing	140	4265	KH	Coastal grassland	
				4257	KS	Coastal invertebrate assemblage	Coastal invertebrate assemblage
				4254	KS	Orobancha purpurea	Yarrow Broom-rape
				4269	KH	Rockpools	
				4254	KH	Sand-dune	
4250	KH	Variscan structures of South Wales and the Mendips	Adeilledau Farisgaidde de Cymru a Bryniau Mendip				
Gallt y Bwlch	Favourable	No information available	23	2062	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
Glanllynau a Glannau Pen-ychain i Gricieth	Favourable	No information available	143	2391	KH	Large shallow inlets and bays	
				2391	KS	Lutra lutra	Otter
				2391	KH	Mudflats and sandflats not covered by seawater at low tide	
				2391	KH	Reefs	
Glannau Aberdaron	Unfavourable	Cutting/ Mowing – insufficient; Fire - deliberate or accidental; Grazing insufficient grazing Grazing overgrazing; Grazing type and/or timing; Inappropriate coastal management	304	1683	KS	Halichoerus grypus	Grey seal
				1683	KS	Lutra lutra	Otter
				1684	KS	Pyrrhocorax pyrrhocorax	Chough
				1683	KH	Reefs	
				1684	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
Glannau Penmon - Biwmares	Unfavourable	Bait collection; and Hand gathering of fish / shellfish	172	1763	KH	Reefs	
Glannau Porthaethwy	Unfavourable	Bait collection; Hand gathering of fish / shellfish Marine - non-native; and Molluscan farming and assoc. structures	68	1756	KH	Reefs	
Glannau Rhoscolyn	Unfavourable	Feature obscured; Fire - deliberate or accidental; Grazing insufficient grazing Grazing type and/or timing; Public access - erosion/disturbance; and Quarrying and mining Scrub invasion	145	1875	KH	Coastal grassland	
				1852	KH	Coastal heath land	
				1852	KH	Dry heath	
				1876	KS	Eel grass	
				1876	KH	Inter-tidal	
				1610	KS	Pyrrhocorax pyrrhocorax	Chough
				1852	KS	Tuberaria guttata	Spotted Rock-rose
1845	KH	Wet heath					
Glannau Tonfanau i Friog	Favourable	No information available	171	2410	KS	Lutra lutra	Otter
				2410	KH	Reefs	
Glannau Ynys Gybi/ Holy Island Coast	Unfavourable	Cutting/ Mowing – insufficient; Fire - deliberate or accidental; Grazing insufficient grazing; Grazing type and/or timing; Inappropriate vehicle use; Public access - erosion/disturbance; Scrub invasion Structural problems, renovation issues, buildings, bridges, caves; and Terrestrial - non-native	401	1384	KH	Coastal heath land	
				1539	KH	Dry heath	
				1385	KH	European dry heaths	
				1546	KH	Northern Atlantic wet heaths with Erica tetralix	
				1546	KS	Plebejus argus	Silver-studded Blue
				1384	KS	Pyrrhocorax pyrrhocorax	Chough
				1383	KH	Rockpools	
				1383	KS	Stryphus ponderosus	a sponge
				1542	KS	Tephrosia integrifolia subsp. maritima	a field fleawort
				1549	KS	Tuberaria guttata	Spotted Rock-rose
1384	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts					

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Glan-traeth	Unfavourable	Freshwaterfish stocking; Drainage Grazing type and/or timing; Structural problems, renovation issues, buildings, bridges, caves; and Water levels	14	441	KS	Triturus cristatus	Great crested newt
Glaslyn	Unfavourable	Grazing overgrazing; Structural problems, renovation issues, buildings, bridges, caves; and Terrestrial - non-native	435	1587	KH	Alluvial forests with Alnus glutinosa and Fraxinus excelsior -Alno-Padion, Alnion incanae, Salicion	
				1587	KS	Old sessile oak woods with Ilex and Blechnum in the British Isles	
				1587	KS	Rhinolophus hipposideros	Lesser horseshoe bat
				1587	KH	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion	
Gloddaeth	Unfavourable	Fire - deliberate or accidental; Insufficient tree management; Public access - erosion/disturbance; Scrub invasion; and Terrestrial - non-native	91	879	KS	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				879	KH	Calcareous grassland	
				879	KH	Dry heath	
				2949	KH	Semi-natural woodland	
				878	KH	Semi-natural dry grasslands and scrubland facies on calcareous substrates -Festuco-Brometalia-	
				878	KH	Taxus baccata woods of the British Isles*	
				878	KH	Tilio-Acerion forests of slopes, screes and ravines*	
				878	KS	Veronica spicata ssp. hybrida	Spiked Speedwell
879	KS	Veronica spicata ssp. hybrida	Spiked Speedwell				
Glynllifon	Unfavourable	Structural problems, renovation issues, buildings, bridges, caves	193	2343	KS	Rhinolophus hipposideros	Lesser horseshoe bat
Gweunydd Pendinas	Unfavourable	No information available	7		KH	Neutral grassland	
Hook Wood	Unfavourable	Terrestrial - non-native; and Tree felling and management	12	3317	KH	Salt-marsh	
				3320	KH	Semi-natural woodland	
Llanddulas Limestone and Gwrych Castle Wood	Unfavourable	Cutting/ Mowing – insufficient; Fire - deliberate or accidental; Grazing insufficient grazing Grazing type and/or timing; Inappropriate vehicle use; Insufficient tree management; Public access - erosion/disturbance; Scrub invasion; Structural problems, renovation	144	4980	KS	Assemblage of RDB and/or Nationally Scarce and/or Atlantic-Western British bryophytes	Assemblage of RDB and/or Nationally Scarce and/or Atlantic-W
				4980	KS	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				4980	KH	Calcareous grassland	
				4997	KH	Dry heath	
				4988	KS	Plebejus argus caernensis	Silver-studded Blue
				4994	KS	Rhinolophus hipposideros- hibernating	Lesser Horseshoe Bat- hibernating
				4980	KH	Semi-natural woodland	
Llyn Maelog	Unfavourable	No information available	36		KH	Eutrophic lake	
Llynnau y Fali - Valley Lakes	Unfavourable	Freshwaterfish stocking; Fertilizer use freshwater non-native; Grazing overgrazing Water pollution - diffuse sources; and Water pollution - discharge(s)	101	8	KS	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				11	KH	Marshy grassland	
				8	KH	Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation	
				16	KH	Standing water -Eutrophic-	
				17	KH	Standing water -Marl/High Alkalinity-	
				7	KH	Swamp	
Lydstep Head to Tenby Burrows	Unfavourable	Cutting/ Mowing – insufficient; Grazing insufficient grazing; Grazing type and/or timing Scrub invasion; Terrestrial - non-native; and Water levels	201	860	KS	Asparagus prostratus	Wild Asparagus
				856	KH	Coastal grassland	
				3126	KS	Orchis morio	Green-winged Orchid
				3126	KH	Sand-dune	
				856	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
Malltraeth Marsh/Cors Ddyga	Unfavourable	Cutting/ Mowing – insufficient; Ditch management; Drainage; Fertilizer use Freshwater non-native; Grazing type and/or timing; Herbicide/ pesticide use; Scrub invasion Terrestrial - non-native; and Water levels	1360	3741	KS	Arvicola terrestris	Water Vole
				3592	KS	Breeding bird assemblage of lowland damp grasslands	Breeding bird assemblage of lowland damp grasslands
				3976	KS	Breeding bird assemblage of lowland open waters and their margins	Breeding bird assemblage of lowland open waters and their mar
				3589	KS	Hottonia palustris	Water-violet
				3686	KS	Oenanthe fistulosa	Tubular Water-dropwort
				3687	KS	Oenanthe fistulosa	Tubular Water-dropwort
				3589	KH	Standing water	
Mariandyrys	Unfavourable	Fire - deliberate or accidental; and Grazing type and/or timing	8	3368	KH	Dry heath	
				3368	KS	Potentilla neumanniana	Spring Cinquefoil
Marloes Mere	Unfavourable	No information available	17	2917	KH	Marshy grassland	
				2917	KS	Oenanthe fistulosa	Tubular Water-dropwort
Milford Haven Waterway	Unfavourable	Bait collection; Dredging: mussel & oyster; Hand gathering of fish / shellfish; Insufficient tree management; Water pollution - diffuse sources; and Water pollution - discharge(s)	2192	5918	KH	Assemblage of RDB and/or Nationally Scarce and/or Atlantic-Western British bryophytes	Assemblage of RDB and/or Nationally Scarce and/or Atlantic-W
				2801	KH	Atlantic salt meadows -Glauco-Puccinellietalia maritimae-	
				5957	KH	Coastal grassland	
				2806	KH	Coastal lagoons*	
				2828	KH	Estuaries	
				2795	KH	Large shallow inlets and bays	
				5960	KS	Lutra lutra	Otter
				2795	KH	Mudflats and sandflats not covered by seawater at low tide	
				5918	KH	New Index of Ecological Continuity: Lichens	New Index of Ecological Continuity: Lichens
				5962	KS	Rhinolophus ferrumequinum- hibernating	Greater Horseshoe Bat- hibernating
				5962	KS	Rhinolophus hipposideros- hibernating	Lesser Horseshoe Bat- hibernating
				2797	KH	Salt-marsh	
				5939	KH	Scrub	
				5918	KH	Semi-natural woodland	
				5959	KH	Sheltered mud	

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Minwear Wood	Unfavourable	Terrestrial - non-native; and Tree felling and management	14	5939	KS	Thecla betulae	Brown Hairstreak
				3127	KH	Semi-natural woodland	
Morfa Abererch	Unfavourable	No information available	99		KH	Lowland heath	
					KH	Vegetated shingle	
					KH	Floodplain fen	
Morfa Dinlle	Unfavourable	Coastal flood defence and erosion control (squeeze); Fertilizer use; Grazing type and/or timing; Molluscan farming and	245	1916	KH	"Fixed dunes with herbaceous vegetation -""grey dunes""-""	
				1916	KH	"Shifting dunes along the shoreline with Ammophila arenaria -""white dunes""-""	
				1915	KH	Embryonic shifting dunes	
Morfa Dyffryn	Unfavourable	Cutting/ Mowing – excessive; Inappropriate vehicle use; Public access - erosion/disturbance; and Scrub invasion	741	1087	KH	"Shifting dunes along the shoreline with Ammophila arenaria -""white dunes""-""	
				1088	KH	Atlantic salt meadows -Glauco-Puccinellietalia maritimae-	
				1087	KH	Dunes with Salix repens ssp. argentea -Salicion arenariae-	
				1082	KH	Humid dune slacks	
				1092	KS	Lutra lutra	Otter
				1085	KS	Petalophyllum ralfsii	
				1089	KH	Reefs	
				1088	KH	Salicornia and other annuals colonising mud and sand	
Morfa Harlech	Unfavourable	Coastal flood defence and erosion control (squeeze); Cutting/ Mowing – excessive; Grazing insufficient grazing; Grazing type and/or timing; Public access - erosion/disturbance; Scrub invasion Terrestrial - native and archaeophyte; Tree felling and management; and Water abstraction	2220	1064	KH	"Shifting dunes along the shoreline with Ammophila arenaria -""white dunes""-""	
				1067	KH	Atlantic salt meadows -Glauco-Puccinellietalia maritimae-	
				1065	KH	Dunes with Salix repens ssp. argentea -Salicion arenariae-	
				1061	KH	Embryonic shifting dunes	
				1066	KH	Estuaries	
				1065	KH	Humid dune slacks	
				1066	KS	Lutra lutra	Otter
				1066	KH	Mudflats and sandflats not covered by seawater at low tide	
				1063	KS	Petalophyllum ralfsii	
				1067	KH	Salicornia and other annuals colonising mud and sand	
				1066	KS	Tursiops truncatus	Bottlenose dolphin
Morfa Uchaf, Dyffryn Conwy	Favourable	No information available	195	5975	KS	Lathyrus palustris	Marsh Pea
				5974	KH	Salt-marsh	
Mynydd Marian	Favourable	Cutting/ Mowing – insufficient; Grazing insufficient grazing; Grazing overgrazing Grazing type and/or timing; Inappropriate	14	3515	KH	Calcareous grassland	
				3517	KS	Neutral grassland	
				3515	KS	Vascular Plant Assemblage	Vascular Plant Assemblage
Mynydd Penarfynnydd	Favourable	Cutting/ Mowing – insufficient; Fire - deliberate or accidental; Grazing insufficient grazing; Grazing type and/or timing; Scrub invasion; and Terrestrial - native and archaeophyte	161	2093	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
Mynydd Tir y Cwmwd a'r Glannau at Garreg yr Imbill	Unfavourable	Coastal flood defence and erosion control (squeeze); and Coastal processes and sediment supply	165	2390	KS	Halichoerus grypus	Grey seal
				2389	KH	Large shallow inlets and bays	
				2390	KS	Lutra lutra	Otter
Newborough Warren - Ynys Llanddwyn	Unfavourable	Coastal flood defence and erosion control (squeeze); Coastal processes and sediment supply; Ditch management; Fertilizer use; Grazing insufficient grazing; Hand gathering of fish / shellfish; Marine - non-native; Scrub invasion; Structural problems, renovation issues, buildings, bridges, caves; Terrestrial - non-native; Tree felling and management; and Tree planting, past and present; Water levels; and Wildfowling	2343	1901	KH	"Fixed dunes with herbaceous vegetation -""grey dunes""-""	
				1926	KH	"Shifting dunes along the shoreline with Ammophila arenaria -""white dunes""-""	
				1912	KS	Amphibian assemblage	Amphibian assemblage
				1338	KS	Anas acuta	Pintail
				1340	KH	Atlantic salt meadows -Glauco-Puccinellietalia maritimae-	
				1341	KS	Dactylorhiza purpurella subsp. cambrensis	Northern Marsh-orchid
				1901	KH	Dunes with Salix repens ssp. argentea -Salicion arenariae-	
				1926	KH	Embryonic shifting dunes	
				1340	KH	Estuaries	
				1911	KS	Hirudo medicinalis	Medicinal Leech
				1906	KH	Humid dune slacks	
				1877	KH	Inter-tidal	
				1926	KS	Luperina nickerlii	Sandhill Rustic
				1345	KH	Mudflats and sandflats not covered by seawater at low tide	
				1913	KH	Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation	
				1340	KS	Ophelia bicornis	a polychaete worm
				1906	KS	Petalophyllum ralfsii	
				1903	KS	Phalacrocorax carbo	Cormorant
				1906	KS	Poronia punctata	Nail Fungus
				1901	KS	Rumex rupestris	
				1340	KH	Salicornia and other annuals colonising mud and sand	
Newport Cliffs	Unfavourable	Cutting/ Mowing – insufficient; Grazing insufficient grazing; and Grazing type	48	4185	KS	Centaurium scilloides	Perennial Centaury
				4181	KH	Coastal grassland	

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Pen y Gogarth / Great Ormes Head	Unfavourable	Air pollution; Bait collection; Cutting/ Mowing – insufficient; Fire - deliberate or accidental; Grazing insufficient grazing; Grazing type and/or timing; Hand gathering of fish / shellfish; Public access - erosion/disturbance; Scrub invasion; Terrestrial - native and archaeophyte Terrestrial - non-native; Tree felling and management; and Waste impacts - fly-tipping, litter, etc	330	2731	KH	Acid grassland	
				718	KS	Alca torda	Razorbill
				718	KS	Antennaria dioica	Mountain Everlasting
				718	KS	Assemblage of RDB and Nationally Scarce lichens	Assemblage of RDB and Nationally Scarce lichens
				722	KS	Assemblage of RDB and/or Nationally Scarce and/or Atlantic-Western British bryophytes	Assemblage of RDB and/or Nationally Scarce and/or Atlantic-W
				718	KS	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				720	KS	Aster linosyris	Goldilocks Aster
				718	KH	Calcareous grassland	
				1766	KH	Caves and overhangs	
				718	KS	Cotoneaster cambricus	Wild Cotoneaster
				2745	KH	Dry heath	
				718	KS	Epipactis atrorubens	Dark-red Helleborine
				718	KS	Genista tinctoria	Dyer's Greenweed
				718	KS	Grassland invertebrate assemblage	Grassland invertebrate assemblage
				718	KS	Helianthemum aciculare	a weevil
				718	KS	Hieracium cambricum	Welsh Hawkweed
				718	KS	Hipparchia semele thyone	Grayling
				718	KS	Hippocrepis comosa	Horseshoe Vetch
				718	KS	Hypochoeris maculata	Spotted Cat's-ear
				718	KS	Idaea dilutaria	Silky Wave
				733	KH	Maritime cliff & associated ledges & crevices	
				718	KS	Meligethes brevis	a pollen beetle
				732	KH	Moderately exposed rock	
				2745	KS	Plebejus argus caernensis	Silver-studded Blue
				1766	KH	Reefs	
				718	KS	Rissa tridactyla	Kittiwake
				1766	KH	Rockpools	
719	KH	Semi-natural woodland					
718	KH	Semi-natural dry grasslands and scrubland facies on calcareous substrates -Festuco-Brometalia-					
1766	KH	Soft piddock bored substrata					
732	KH	Under-boulders					
721	KS	Uria aalge	Guillemot				
718	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts					
726	KS	Veronica spicata ssp. hybrida	Spiked Speedwell				
Penmaen	Favourable	No information available	0		KS	Toad-flaxed leaved St Johns Wort	
Penmaenuchaf Hall	Favourable	Structural problems, renovation issues, buildings, bridges, caves	0	1590	KS	Rhinolophus hipposideros	Lesser horseshoe bat
Penrhynoedd Llangadwaladr	Favourable	No information available	177		KS	Lesser black backed gull	
Porth Ceiriad, Porth Neigwl ac Ynysoedd Sant Tudwal	Unfavourable	Grazing insufficient grazing; Grazing overgrazing; Grazing type and/or timing Scrub invasion; and Terrestrial - native and archaeophyte	559	1141	KS	Atlantic salt meadows -Glaucopuccinellietalia maritimae-	
				1141	KS	Halichoerus grypus	Grey seal
				2388	KS	Lutra lutra	Otter
				1099	KS	Pyrrhocorax pyrrhocorax	Chough
				2388	KH	Reefs	
Porth Diana	Favourable	Grazing type and/or timing	1	1141	KH	Submerged or partially submerged sea caves	
				3358	KH	Coastal heath land	
Porth Dinllaen i Borth Pistyll	Unfavourable	Anchoring; Coastal processes and sediment supply; Cutting/ Mowing – insufficient; Grazing insufficient grazing; and Mooring	129	3358	KS	Tuberaria guttata	Spotted Rock-rose
				2381	KS	Halichoerus grypus	Grey seal
				2381	KS	Lutra lutra	Otter
				2381	KH	Mudflats and sandflats not covered by seawater at low tide	
				2381	KH	Reefs	
Porth Towyn i Borth Wen	Favourable	No information available	74	2064	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
				2382	KS	Halichoerus grypus	Grey seal
Porthydd Moor	Favourable	Grazing insufficient grazing; and Terrestrial - non-native	10	2382	KS	Lutra lutra	Otter
				2382	KH	Reefs	
				3140	KH	Fen -topogenous mires in valleys, basins and flood plains-	
Puffin Island - Ynys Seiriol	Favourable	No information available	31	1098	KS	Phalacrocorax carbo carbo	Cormorant
Ramsey / Ynys Dewi	Favourable	No information available	297	204	KS	Luronium natans	
Rhoscolyn Reedbed	Unfavourable	No information available	15	204	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
						Swamp	
Rhosneigr Reefs	unfavourable	Inappropriate pollution response; Marine - non-native; Public access - erosion/disturbance; and Water pollution -	28	5148	KH	Caves and overhangs	
				5148	KH	Rockpools	
				5148	KH	Under-boulders	
Rhosydd Yerboston/Yerboston Moors	Unfavourable	Grazing type and/or timing	91	153	KS	Euphydryas -Eurodryas, Hypodryas- aurinia	Marsh fritillary butterfly
				3235	KS	Eurodryas aurinia	Marsh Fritillary
				153	KH	Marshy grassland	
				153	KH	Molinia meadows on calcareous, peaty or clayey-silt-laden soils -Molinion caeruleae-	
				3227	KH	Neutral grassland	

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Skokholm	Favourable	No information available	116	823	KS	A seabird assemblage of international importance	
				2372	KS	Asio flammeus	Short-eared Owl
				825	KS	Breeding Seabird Colony	Breeding Seabird Colony
				2372	KS	Fratercula arctica	Puffin
				2369	KS	Halichoerus grypus	Grey Seal
				2372	KS	Hydrobates pelagicus	Storm Petrel
				823	KS	Larus fuscus	Lesser Black-backed Gull
				2372	KS	Puffinus puffinus	Manx Shearwater
				823	KS	Pyrrhocorax pyrrhocorax	Chough
				2372	KH	Reefs	
Skomer Island and Middleholm	Favourable	No information available	332	825	KS	Teloschistes flavicans	Golden Hair-lichen
				823	KS	A seabird assemblage of international importance	
				2372	KS	Asio flammeus	Short-eared Owl
				825	KS	Breeding Seabird Colony	Breeding Seabird Colony
				824	KH	Coastal grassland	
				823	KS	Fratercula arctica	Puffin
				2784	KS	Halichoerus grypus	Grey seal
				823	KS	Hydrobates pelagicus	Storm Petrel
				2372	KS	Larus fuscus	Lesser Black-backed Gull
				823	KS	Puffinus puffinus	Manx Shearwater
Slebech Stable Yard Loft, Cellars & Tunnels	Favourable	No information available	0	111	KS	Rhinolophus ferrumequinum	Greater horseshoe bat
				825	KS	Teloschistes flavicans	Golden Hair-lichen
St. David's Peninsula Coast	Unfavourable	Grazing insufficient grazing; Grazing type and/or timing; Public access - erosion/disturbance; and Scrub invasion	686	5952	KS	Assemblage of RDB and/or Nationally Scarce and/or Atlantic-Western British bryophytes	Assemblage of RDB and/or Nationally Scarce and/or Atlantic-W
				211	KS	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				217	KS	Coastal invertebrate assemblage	Coastal invertebrate assemblage
				5951	KH	Dry heath	
				2912	KH	Exposed rock	
				206	KS	Halichoerus grypus	Grey Seal
				2439	KS	Luronium natans	
				206	KS	Pyrrhocorax pyrrhocorax	Chough
				5949	KS	Pyrrhocorax pyrrhocorax- breeding	Chough- breeding
				208	KH	Rockpools	
St. Margaret's Island	Unfavourable	No information available	11	3203	KH	Coastal grassland	
				871	KH	"Fixed dunes with herbaceous vegetation -""grey dunes""-""	
Stackpole	Unfavourable	Boats - not powered; Boats – powered; Cutting/ Mowing – insufficient; Grazing insufficient grazing; Public access - erosion/disturbance Scrub invasion; Siltation; Terrestrial - non-native; Tree felling and management;	314	874	KH	Coastal grassland	
				92	KH	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	
				92	KS	Lutra lutra	Otter
				2447	KS	Pyrrhocorax pyrrhocorax	Chough
				870	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
Stackpole Quay - Trewent Point		Fertilizer use; and Grazing overgrazing	64	4222	KH	Maritime cliff & associated ledges & crevices	
				876	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
Strumble Head - Llechdafad Cliffs	Unfavourable	Fire - deliberate or accidental; Grazing insufficient grazing; Grazing type and/or timing; and Public access - erosion/disturbance	205	226	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
Sychnant Pass	Favourable	Cutting/ Mowing – insufficient; and Terrestrial - non-native	108	4187	KH	Dry heath	
				4187	KH	Flush and spring -soligenous mire-	
				4387	KS	Pilularia globulifera	Pillwort
				4387	KH	Standing water	
Tenby Cliffs And St. Catherine's Island	Unfavourable				KH	Assemblage of RDB and/or Nationally Scarce vascular plants	
The Offshore Islets Of Pembrokeshire / Ynysoedd Glannau Penfro	Favourable	No information available	29		KH	Maritime cliffs and associated cliffs and ledges	
The Skerries	Favourable	Pest Control; and Structural problems, renovation issues, buildings, bridges, caves	17	425	KS	Sterna paradisaea	Arctic Tern
Tiroedd a Glannau Rhwng Cricieth ac Afon Glaslyn	Unfavourable	No information available	577	2394	KH	Estuaries	
				5926	KS	Lutra lutra	Otter
				2395	KH	Mudflats and sandflats not covered by seawater at low tide	
				5926	KH	Reefs	
				5926	KH	Submerged or partially submerged sea caves	
Traeth Lafan	Favourable	Coastal flood defence and erosion control (squeeze); Hand gathering of fish /	2691	1760	KS	Haematopus ostralegus	Oystercatcher
				2963	KH	Mudflats and sandflats not covered by seawater at low tide	

SSSI Site Name	Condition	Issue	Hectares (Ha)	Unit Id	Feature Status In Unit KS = Key Species, KH = Key Habitat	Key Species & Habitat Feature Descriptions	English Description
Traeth Lligwy		Public access - erosion/disturbance; Water pollution - diffuse sources; and Water pollution - discharge(s)	27	5556	KH	Rockpools	
Traeth Pensarn	Unfavourable	Coastal flood defence and erosion control (squeeze); Coastal processes and	52	4534	KH	Other: Strandline vegetation	
				4534	KH	Shingle/boulders above high water mark	
Tre Wilmot	Unfavourable	Fire - deliberate or accidental; and Grazing insufficient grazing	63	1551	KS	Gentiana pneumonanthe	Marsh Gentian
				1551	KH	Northern Atlantic wet heaths with Erica tetralix	
				1552	KS	Pyrrhocorax pyrrhocorax	Chough
Tre'r Gof	Unfavourable	Grazing insufficient grazing; Grazing type and/or timing; Scrub invasion; and Water	10	5056	KH	Fen -topogenous mires in valleys, basins and flood plains-	
				5058	KS	Thelypteris palustris	Marsh Fern
Trefeiddan Moor	Unfavourable	No information available	22		KH	Swamp	
			2302	1333	KH	"Fixed dunes with herbaceous vegetation -""grey dunes""-""	
				1337	KH	"Shifting dunes along the shoreline with Ammophila arenaria -""white dunes""-"	
				1336	KS	Arvicola terrestris	Water Vole
				1333	KH	Dunes with Salix repens ssp. argentea -Salicion arenariae-	
				1337	KH	Embryonic shifting dunes	
				1337	KS	Gentianella uliginosa	Dune Gentian
				1333	KH	Humid dune slacks	
				1333	KS	Liparis loeselii	Fen Orchid
				1337	KS	Petalophyllum ralfsii	
				4545	KS	Pluvialis apricaria	Golden Plover
				4536	KH	Sand-dune	
				1334	KH	Semi-natural woodland	
				1335	KH	Standing water	
				1335	KH	Swamp	
Ty Bach Hen Ysgol Arthog		No information available	0			lesser horseshoe bats	
Ty Croes	Unfavourable	No information available	28			Coastal heathland	
			369	1923	KH	"Fixed dunes with herbaceous vegetation -""grey dunes""-""	
				1925	KH	"Shifting dunes along the shoreline with Ammophila arenaria -""white dunes""-"	
				1919	KS	Assemblage of RDB and/or Nationally Scarce vascular plants	Assemblage of RDB and/or Nationally Scarce vascular plants
				1925	KH	Dunes with Salix repens ssp. argentea -Salicion arenariae-	
				1925	KH	Embryonic shifting dunes	
				1805	KH	Estuaries	
				1924	KS	Gammarus chevreuxi	an amphipod
				1925	KH	Humid dune slacks	
				1919	KH	Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation	
				1925	KS	Petalophyllum ralfsii	
				1925	KH	Sand-dune	
Waterwynch Bay to Saundersfoot Harbour	Favourable	No information available	87	2870	KH	Large shallow inlets and bays	
				2870	KH	Mudflats and sandflats not covered by seawater at low tide	
				2870	KH	Rockpools	
Wig Bach a'r Glannau i Borth Alwm	Favourable	No information available	44	2386	KS	Halichoerus grypus	Grey seal
				2386	KH	Reefs	
Y Foryd	Favourable	Bait collection; Hand gathering of fish / shellfish	283	1753	KS	Anas penelope	Wigeon
				1753	KS	Eel grass	
				1753	KH	Mudflats and sandflats not covered by seawater at low tide	
				1753	KH	Salt-marsh	
Ynys Enlli	Favourable	Drainage; Energy production – renewables; Fire - deliberate or accidental; Grazing type and/or timing; Structural problems, renovation issues, buildings, bridges, caves; and Terrestrial - native and	206	2384	KS	Halichoerus grypus	Grey seal
				1749	KS	Puffinus puffinus	Manx Shearwater
				2056	KS	Pyrrhocorax pyrrhocorax	Chough
				2383	KH	Reefs	
				2056	KH	Vegetated sea cliffs of the Atlantic and Baltic coasts	
Ynys Feurig	Unfavourable	Pest Control; and Public access - erosion/disturbance	25	427	KH	Coastal grassland	
				427	KS	Sterna paradisaea	Arctic Tern
Ynysoedd Y Gwylanod, Gwylan Islands	Favourable	No information available	5		KS	Puffin	
Yr Eifl	Unfavourable	No information available	425		KH	Dry heath (except coastal)	

**APPENDIX E CONSULTATION RESPONSES RECEIVED ON DRAFT SEA SCOPING
REPORT AND HOW THE RESPONSES HAVE BEEN DEALT WITH IN
THE FINAL SEA SCOPING REPORT**

West Wales SMP2 Consultation Comments Form



Document Title:	West Wales SMP2 SEA Draft	Project No.:	9S9001	To be returned to:	C Earlie
General Comments:		Reviewer:	V Schlottman	Organisation:	NEAS EA Wales

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
General:	The reading of the Scoping Report is complicated by the list of references, legislations and or plans/policies.	V Schlottmann	5.01.2010	An assessment of plans, policies and programmes is part of the SEA process and thus a list of plans is required to inform the reader which plans are relevant to the study. However, the list of plans in the beginning of each baseline section (Section 5 - 11) of the report have been removed for ease of reading with the main reference list of plans being associated with Section 3.2.2.	PB	26/05/2010
	15.2.1 gives a summary but incomplete description of the SEA to follow including mitigation / compensation.	V Schlottmann	5.01.2010	A complete description of the SEA process / update has been undertaken for Section 15.	PB	26/05/2010
1.2.1:	Presumably WAG are signed up to the principle of SMP2's requiring SEA. This needs to be stated as DEFRA are not funding these WAG are.	V Schlottmann	5.01.2010	Based on other SMPs WAG are signed up to the principle of SMP2's requiring SEA.	PB	26/05/2010
1.2.2:	Any WAG guidance?	V Schlottmann	5.01.2010	The key guide which WAG encourage is: Countryside Council for Wales, English Nature, Environment Agency, Royal Society for the Protection of Birds (2004). Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners. We have stated this in the SEA Scoping Report.	PB	26/05/2010
	Generally throughout the document there is a lot of reference to DEFRA and it should be referring to WAG and welsh policy.	V Schlottmann	5.01.2010	The SEA has been reviewed and relevant Welsh policy has been incorporated into the SEA Scoping Report.	PB	26/05/2010
Q3.1:	The Register of Welsh Historic landscapes (CCW 1995) should be reviewed.	V Schlottmann	5.01.2010	Unable to find report.	PB	26/05/2010
	The baseline section is very long and could have been more focussed on the study area rather than including data for a lot of Wales that isn't relevant to the SMP (eg Blaenavon World heritage Site). I also think a lot of the detail isn't appropriate (or necessary) for a strategy.	V Schlottmann	5.01.2010	Noted. Data directly related to the study area in places has been provided in the SEA Scoping Report, however detailed data / information was lacking for the study area and thus the only available data was for the whole of Wales.	PB	26/05/2010
	The BAP section should include reference to BAP habitat loss through coastal squeeze as this is an issue for WAG, the Agency and the Local Authorities.	V Schlottmann	5.01.2010	Noted and SEA Scoping Report has been updated to include comment.	PB	26/05/2010
11.3.6:	The baseline data relating to travel focuses on mainline railways which is relevant to a point, however, the rail link between Aberystwyth and Pwllheli isn't mentioned and this is a key tourist (and resident) rail link that runs along the coast and so has very important implications in coastal flood protection.	V Schlottmann	5.01.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
13.3.1:	Do you mean Barmouth (not Barnmouth)?	V Schlottmann	5.01.2010	Yes and corrected.	PB	26/05/2010
15.1.1:	Suggest review of text to read, The SEA will provide a comprehensive assessmnet of effects on the enviornment which will also include a strategic assessmnet of those effects identified in the AA and WFD reports.	V Schlottmann	5.01.2010	Noted and SEA Scoping Report has been updated to include comment.	PB	26/05/2010
Q15.1:	I agree with the scope of the SEA Table 5.4: I don't think that at this strategic scale there is a need to go down to locally important sites. Generally we draw the line at nationally important (SSSI) for strategies as there are so many Natura 2000 sites and SSSIs in Wales. It's also questionable as to whether listed buildings should be factored in at strategy level.	V Schlottmann	5.01.2010	LBs is included at strategy level where they are Grade I or II* (EH guidance) but worth considering if there is CADW guidance. Point above about including locally important sites but that they are unlikely to influence the strategy apply.	PT	26/05/2010
Glossary	Please reconsider the definition of EIA.	V Schlottmann	5.01.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
	As I said in my earlier email, I'm happy to discuss these comments with you if necessary. I'd also be interested to know how you intend on progressing the HRA as we are working on this for the Severn SMP2 currently.	V Schlottmann	5.01.2010	Noted and was invited to the progress meeting to discuss the SEA/HRA, however Vicky was unavailable.	PB	26/05/2010
	The Agency is working on a capital project at Fairbourne that is at options appraisal stage. The project is looking at fluvial aswell as coastal flooding and if you could provide any info about emerging SMP2 policies for this policy unit we would be very grateful.	V Schlottmann	5.01.2010	Noted and was to be discussed during the the progress meeting on the SEA/HRA, however Vicky was unavailable.	PB	26/05/2010
Document Title:	West Wales SMP2 SEA Draft	Project No.:	9S9001	To be returned to:	C Earlie	
General Comments:		Reviewer:	D Cowley	Organisation:	Isel of Anglesey CC	
Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Page 144:	The Isle of Anglesey Local Development Plan (LDP)	D Cowley	14.01.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
	The notes on the LDP need to be updated to take account of changes in the LDP process, which has had to go back some way. Advise check with Bob Thomas on the LDP team for detail. RWTPL@anglesey.gov.uk 01248 752447	D Cowley	14.01.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
	2. It is quite disappointing to see no mention of Anglesey LBAP, despite all other LBAPs being listed in this Appendix. The relevant and most up to date material is at: https://www.ukbap-reporting.org.uk/plans/lbap_plans.asp?LBAP=%7B42A89BF7%2D2E26%2D4C14%2D8253%2D40937ACA129D%7D (the BARS version of the LBAP will evolve over time, at any given time will be the current LBAP).	D Cowley	14.01.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
Document Title:	West Wales SMP2 SEA Draft	Project No.:	9S9001	To be returned to:	C Earlie	
General Comments:		Reviewer:	T Jones	Organisation:	CCW	
Paragraph reference	Comment	Name	Date	RH Response	Name	Date

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Figure 1.1:	CCW notes the geographical scope of this Study Area. Given the complexities in coastal processes, clear and explicit integration of this SEA with the relevant assessments of adjacent SMPs would be welcomed.	T Jones	14.04.2010	Noted.	PB	26/05/2010
2.1.3:	Clarification would be welcomed as to whether SMPs, although non statutory, should be taken into account/considered by other plans and programmes e.g. Local Development Plans.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
2.2.2:	A map indicating the 42 process units within this SMP would be useful.	T Jones	14.04.2010	Noted. SD is to provide a map with the process units.	PB	26/05/2010
3.2.2:	CCW would suggest that the review should include and/or take account additional policies, plans and programmes.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
3.2.5:	In the light of our comments above on relevant PPPs, CCW would suggest that Annex A to this scoping report requires revision and updating.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
3.3.8:	CCW would welcome clarification as to whether consideration of strategic land use plan 'coverage' has included the policies/allocation of land use plans currently in development e.g. the Ceredigion LDP etc	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
4.2:	Reference should be made to relevant Regional Waste Plans and Transport Plans, the Wales National Transport Plan, Planning Policy Wales 2002, Tan 5 (2009), TAN 15, TAN 14 etc. Reference should also be made to the European Landscapes Convention, to both relevant AONB and National Park Management Plans and to Landmap, Wales Coastal Tourism Strategy and the Wales Transport Plan.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
4.2.2:	No reference has been made to relevant Unitary Development Plans (adopted and unadopted) and/or developing Local Development Plans. CCW would suggest, given their age, it would be inappropriate to rely on Locals Plans to inform the important decisions that will need to be made within this SMP	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
4.3.6 - 4.3.10:	Given that this SEA relates to an SMP, CCW would expect the baseline data for land use to relate primarily to coastal areas and environmental facets and process. Whilst the information provided is thorough in terms of agricultural land use, CCW would question, for example, the relevance of upland land use and black grouse decline to a Shoreline Management Plan. Baseline information provided should be relevant to the Plan under scrutiny and should provide a basis for subsequent assessment of the environmental effects of that Plan on the environment.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
6.3:	It would be useful for a map, summarising information in 6.3.1 to 6.3.9 inclusive, to be provided within this baseline.	T Jones	14.04.2010	Noted, however given the complexity in producing such a map, it is more than likely if required to be produced for the ER.	PB	26/05/2010
6.2.10:	Further information on the frequency, magnitude etc of surges to be provided, notably since the potential increase in tidal surges is likely to have a major bearing on the focus of the SMP.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
6.2.11:	Clarification is required regarding the proportion of offshore sediment supplied by current geomorphological processes. CCW would suggest that current erosion release processes' contribution to sediment are negligible and that the majority of sediment offshore and inshore are glacially/post-glacially derived. Derivation of offshore sediment has potential implications in respect of sand dune supply.	T Jones	14.04.2010	Noted. However would require further detailed analysis by the engineers. This aspect will be further assessed in the ER.	PB	26/05/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
6.3.12-6.12.16:	It would be useful for a map, summarising information sediment transport information, to be provided within this baseline.	T Jones	14.04.2010	Noted, however given the complexity in producing such a map, it is more than likely if required to be produced for the ER.	PB	26/05/2010
Figure 6.1:	Further explanation would be welcomed regarding the nature of the four categories of flood and coastal defenses. In addition, further information would be welcomed regarding the sensitivities and vulnerabilities of the four categories of defence e.g. where sea defences (natural) involve sand dune systems, it would be useful for information on the risks/threats etc to these features to be summarised within this baseline report.	T Jones	14.04.2010	Noted.	PB	26/05/2010
7.3.11 and 7.3.12:	Given that this SEA relates to an SMP, CCW would expect the baseline data for soils to relate primarily to coastal areas and their environmental processes. Whilst the information provided is thorough in terms of agricultural terms, CCW would question, for example, the relevance of agricultural soil classification and Tir Gofal across the whole of Wales to a developing Shoreline Management Plan on the West coast. Baseline information provided should be relevant to the Plan under scrutiny and should provide a basis for subsequent assessment of the environmental effects of that Plan on the environment.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
8.3.14:	CCW would suggest that this section refers specifically to the Register of Landscapes of Special Historic Interest in Wales (CCW/CADW/ICOMOS). It is suggested that the statement that 'historic landscape' have no 'special protection' is unfortunate. Whilst Sites and Landscapes on the Register have no specific statutory protection, CCW considers that all such landscapes worthy of protection in their own right.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
9.3.5:	Reference should be made in this section to Ramsar sites which, as a matter of policy, are afforded the same degree of protection as European sites. CCW would suggest a list, or ideally a map, indicating internationally designated sites relevant to this SMP should be provided at this point in the section (as opposed to Table 9.4).	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
Table 9.4:	The following sites should also be included in this table: Angelsey and Llyn Fens Ramsar, The Dee Estuary Ramsar, The Dee Estuary SPA, Grassholm SPA and Dee Estuary SAC	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
Table 9.4:	You may also wish to consider including the following sites: River Dee and Bala Lake SAC; Afon Eden SAC.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
9.2.24 - 9.2.29:	Information should be provided on all relevant marine fisheries sectors including scallop dredging.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
10.3.5:	See comments on 8.3.14. It is suggested that designated World Heritage Sites are also S.A.Ms.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
Table 11.1:	Further information would be welcomed as to whether any ports/marinas and moorings within the Plan area are affected by siltation/require regular dredging.	T Jones	14.04.2010	Noted.	PB	26/05/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
11.5:	Given that this SEA relates to an SMP, CCW would expect the baseline data for transport infrastructure to relate primarily to the Plan area.	T Jones	14.04.2010	Noted. Data directly related to the study area in places has been provided in the SEA Scoping Report, however detailed data / information was lacking for the study area and thus the only available data was for the whole of Wales. However this has been updated as best as possible in relation to the plan area.	PB	26/05/2010
12.2.1:	Reference should be made to any predicted changes in prevailing wind/wave direction and predicted changes in surge frequency/magnitude.	T Jones	14.04.2010	Noted.	PB	26/05/2010
13.3.1:	The first bullet point should also refer to 'backflow' of storm water/sewerage infrastructure.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
13.5:	Reference should be made to the potential risks of sea level rise/surge etc on estuarine and riparian habitats.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
Table 14.2:	Reference should be made to climate change issues relating to saltwater incursion into water supply/abstractions. This table has no consideration of sustainability issues relating to material assets including transport infrastructure, fluvial processes and functions. SMP policies should seek to ensure that valued material assets such as transport infrastructure etc are protected and maintained where appropriate and/or that infrastructure is adaptable to climate change issues.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
Table 15.1:	Clarification is required as to what is meant and/or understood by environmental parameters. In terms of flora and fauna, consideration must be given to the geophysical processes and functions that support flora and fauna. In terms of traffic and transport, CCW would suggest that an examination of traffic and volume should be supported by an examination of transport infrastructure. Consideration of water quality should be extended to include a consideration of risks/impacts on water resources.	T Jones	14.04.2010	SEA Scoping Report has been updated to include comment.	PB	26/05/2010
Table 15.4:	CCW would suggest that the use of terms like land-use and biodiversity as SEA 'Objectives' is unhelpful. It may be appropriate, in the interests of consistency, to use existing SEA objectives developed within the SEA processes of adjacent SMPs.	T Jones	14.04.2010	Noted. The SEA objectives developed within the SEA processes of adjacent SMPs will be used for this SEA.	PT	16/06/2010

**ANNEX F – CONSULTATION RESPONSES AND ACTIONS/RESPONSE
FOLLOWING CIRCULATION OF THE DRAFT ENVIRONMENTAL REPORT**

West of Wales SMP2 Consultation Comments Form



Document Title:	West of Wales SMP2 SEA Environmental Report Draft for CSG Comment	Project No.:	9S9001	To be returned to:		
General Comments:	I think it is generally very good and clearly set out.		Reviewer:	V Schlottman	Organisation:	Environment Agency Wales
Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Summary	Doesn't really mention the potential need for relocation of / impact to communities in the future if predicted sea level rise occurs, which is what some of the SMP2 policies recommend. I'd have thought this is a significant impact to the human population which needs to be included.	V Schlottman	01-Oct-10	Summary updated to reflect the potential need for relocation of / impact to communities in the future if predicted sea level rise occurs.	P.Brunner	03/11/2010
1.3.4	Refer to WAG.	V Schlottman	01-Oct-10	Reference to WAG has been incorporated into Section 1.3.4 of the ER.	P.Brunner	03/11/2010
Table 4.1	I don't find this table very clear, and it isn't really explained by the text. The theory of it is good and assessment of conflict between objectives is required, however, I think it needs more explanation as to why there are two quite different results for each comparison (no conflict - green and conflict-orange)	V Schlottman	01-Oct-10	As stated in Section 4 of the ER - Table 4.1 shows where the specific achievement of one objective can at the PDZ level result in another objective not being achieved or even adversely affecting the interests 'supported' by that objective and as such conflict is highlighted as an amber row. Where there is no conflict or the objective supports the achievement of another objective, the row is highlighted green. However, different conflicts can occur for the objectives in response to both positive and negative outcomes. For example, between natural environment objectives and human related objectives, allowing natural processes to occur (and the resulting development and extension of new or different habitats) can result in the loss of human assets (built heritage, archaeology, infrastructure, settlements).	P.Brunner	03/11/2010
Methodology	Good, transparent and well laid out. Detail and the results of the assessments are clearly set out, along with mitigation in the appendices. I can't really comment on the findings at all locations as I don't know them well enough. Hopefully this will be picked up by local operators and through engaging with local communities.	V Schlottman	01-Oct-10	Noted.	P.Brunner	03/11/2010
	In the assessment tables I'm surprised that movement of communities is assessed as a moderate negative impact whereas loss of the coastal path is a major negative impact. This is I think a reflection of the scales of impact, eg. whether it occurs across all of the PDZ or most of it, but it is likely to cause reaction in those communities at risk and perhaps more explanation is required or consideration as to how to get across these messages.	V Schlottman	01-Oct-10	Coastal paths of the West of Wales are of <u>national significance</u> with any potential impact upon them (either negative or positive) classified as major. In some instances, it may not be possible to move the paths (in comparison to the adaptation of communities), which would be lost by such policies as NAI or MR and thus major negative impact.	P.Brunner	03/11/2010
Appendix C	SSSI assessment tables ID major negative impacts on some SSSI's but don't put any suggested mitigation (in some cases). If there is no way to mitigate with the SSSI affected then do decision makers need to accept it? or should we be mitigating elsewhere? Needs to be documented either way.	V Schlottman	01-Oct-10	Appendix C has been updated to incorporate mitigation for all major negative impacts on SSSIs.	P.Brunner	03/11/2010
Table 2.2	States in Table 2.2 that an objective is to avoid the impact on.....locally designated conservation sites (LNR's and RSPB reserves). But the assessment tables don't seem to assess them. I suggest that this is too much detail at this level anyway.	V Schlottman	01-Oct-10	Agree. A comment regarding RSPB and LNRs sites will be included in ER, stating that, at the strategic level such designations will not be assessed for this SMP.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
General Comments:		Reviewer:	M Webber	Organisation:	Pembrokeshire CC	
I have no specific comments on the SEA of the West of Wales SMP. Though my comments regarding other plans considered for the HRA is also relevant to the SEA.						
Paragraph reference	Comment	Name	Date	RH Response	Name	Date
4.2	The PCNPA LDP (and possibly their management plan) should be included; the amount of coastal land within PCCs planning jurisdiction is limited - the majority is in the Park.	M Webber	04-Oct-10	Table 4.24 has been updated to reflect the consideration of the plans.	P.Brunner	03/11/2010
4.2.2	LDFs and LDDs apply in England not in Wales - the correct terminology is LDPs.	M Webber	04-Oct-10	Paragraphs edited.	P.Brunner	03/11/2010
6.2.3	Pembrokeshire LBAP. There are other coastal habitats and species which should also be included in this assessment. See attached list for info, Bethan Cox is our LBAP contact.	M Webber	04-Oct-10	BAP habitats have been assessed for all councils for the West of Wales in the SEA.	P.Brunner	03/11/2010
	General comment on compensatory measures - more detail is needed in this document.	M Webber	04-Oct-10	At this Stage (Appropriate Assessment), it is not relevant to detail compensatory measures, as the final SMP policies are unknown until after Public Consultation and it is after that where compensatory measures are identified.	P.Thornton	25/10/2010
	There are also a few typos.	M Webber	04-Oct-10	Further spell checking has been undertaken to remove typos.	P.Thornton	25/10/2010
General Comments:		Reviewer:	D Cowley	Organisation:	Anglesey CC	
Our LBAP is at: https://www.ukbap-reporting.org.uk/plans/lbap_plans.asp?LBAP={42A89BF7-2E26-4C14-8253-40937ACA129D}						
Paragraph reference	Comment	Name	Date	RH Response	Name	Date
	Anglesey's LBAP not included; I seem to recall pointing this out in earlier comments - it is important that the document is taken account of.	D Cowley	05-Oct-10	Consideration of Anglesey's LBAP has been previously included in the Scoping Report, page 16 (Appendix E of the ER). However, an assessment of this plan against the influence of the SEA and SMP has also been provided in Appendix A of the Scoping Report - Key Relevant Existing Policies, Plans and Strategies.	P.Brunner	03/11/2010
	Information given in the same Appendix on The Isle of Anglesey Local Development Plan (LDP) 2006 -2021 is no longer so valid, as the LDP process has had to go back some way and is currently likely to be merged to become part of one joint LDP with Gwynedd.	D Cowley	05-Oct-10	The change associated with The Isle of Anglesey LDP has been noted and removed from the Scoping Report (Appendix E of the ER).	P.Brunner	03/11/2010
Table 15.4	West of Wales SMP2 Sustainability Objectives and Indicators Biodiversity, Flora and Fauna 'Features covered by the objective (following scoping)' include: Local Nature Reserves (LNRs) and RSPB reserves. Suggest include Wildlife Trust Reserves also.	D Cowley	05-Oct-10	Based on the strategic level of assessment, such designations will not be assessed for this SMP.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
General Comments:		Reviewer:	T Jones / D Worrall	Organisation:	CCW	
Our comments are made in the context of our role as consultation body under the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 and advisor to the Welsh Assembly Government on matters pertaining to the natural heritage of Wales and its coastal waters. CCW welcomes the efforts of the Environment Agency Wales, West of Wales Coastal Group and you, as their consultants, in respect of this SEA process. We are pleased to note that many of the points identified in previous responses have been incorporated and addressed. CCW does note, however, that there are still issues to be resolved as the SEA process progresses and would welcome the opportunity to meet with the relevant partners to discuss these issues further.						
Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Non-technical summary	The aim of the non-technical summary is to provide a simplified version of the Plan summary. In the draft ER, the non-technical summary contains a large number of acronyms, which need explanation if this section is to best serve its purpose.	T Jones / D Worrall	21-Oct-10	An abbreviation and acronym table has been provided in the ER (Page 113), however the non-technical summary has been checked and updated to reduce the number of acronyms which have not been abbreviated and further explained.	P.Brunner	03/11/2010
1.	Introduction and background. In addition to the map of Policy Development Zones (PDZs) it would be beneficial to have a map of the Policy Units (PUs). The location of such a map is not even cross-referenced. The inclusion of this document would very much aid interpretation of the document.	T Jones / D Worrall	21-Oct-10	A map of the policy units is provided in Chapter 4 of the SMP.	P.Brunner	03/11/2010
1.6.3	Implications of SMP Policy on Environmental Receptors. The draft Environment Report states that Table 1.3 gives a summary of the overall potential effects of the SMP on the environment but it does not.	T Jones / D Worrall	21-Oct-10	Table 1.3 provides a list of key receptors which will most likely be impacted upon by SMP policy. The purpose of this table is not to detail the potential impacts, however Table 1.2 does provide potential generic implications of each SMP option. Thus, the title for Table 1.3 has been changed to reflect this response.	P.Brunner	03/11/2010
Tables 1.2 and 1.3	These tables are both titled 'Potential Generic Implications of each SMP option' yet are clearly different. Table 1.3 summarises the way that SEA Receptors relate to SMP terminology.	T Jones / D Worrall	21-Oct-10	Agree and table titles will be changed (see above response).	P.Brunner	03/11/2010
Table 1.2	CCW welcomes the attention given to listing environmental, social and economic impacts in considering the potential generic implications (both positive and negative) of each SMP option.	T Jones / D Worrall	21-Oct-10	Noted.	P.Brunner	03/11/2010
1.9.3	Evaluation of the Plan and Alternatives. CCW welcomes the clear rationale given for the method used in applying the assessment. This appears to be a pragmatic and sensible approach that avoids unnecessary repetition.	T Jones / D Worrall	21-Oct-10	Noted.	P.Brunner	03/11/2010
Table 2.2	CCW welcomes the SEA objectives and, in particular, the decision to use objectives developed for the adjacent North Wales and North West England SMP to ensure consistency. As previously mentioned, CCW would welcome reassurance that consistency with the SMP2 for Lavernock Point to St Ann's Head (South Wales) has also been taken into consideration.	T Jones / D Worrall	21-Oct-10	The consideration of the Lavernock Point to St Ann's Head (South Wales) has been taken into account in the development of the West of Wales SMP. However, it should be noted that the two SMPs have different coastal processes and there is potentially no interaction between the two SMPs.	P.Brunner	03/11/2010
Table 2.2	In considering the SEA Objective for Biodiversity, Flora and Fauna, reference is made to BAP habitats but there is no specific mention of BAP species. Specific reference could also be made to the need for consideration of both terrestrial and marine habitats and species.	T Jones / D Worrall	21-Oct-10	In regards to BAP species, these are more transient compared to fixed BAP habitats and the level detail for site specific BAP species was not known for all sites. However, based on the assessment of the SSSI interest features at the higher level of assessment would have a cascading influence on the overall management of the BAP species for the West of Wales SMP2.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Table 2.2	CCW seeks clarification with regard to the SEA Receptor title 'Earth Heritage, Soils and Geology' – what is the difference between earth heritage, soils and geology as the title seems to repeat the same/similar receptors? Simplification of this title may be less confusing. We would also recommend that the features covered, indicators and targets for the SEA receptor 'Earth Heritage, Soils and Geology' are extended to include GCR (Geological Conservation Review) sites as well as SSSIs.	T Jones / D Worrall	21-Oct-10	The SEA objective title for Earth Heritage, Soils and Geology has been changed to geology and geomorphology for simplicity.	P.Brunner	03/11/2010
3.3.4	Biodiversity. The risk of climate change/sea level rise on The Skerries and Ynys Feurig may even have a positive benefit. The Cemlyn lagoon may change in character and require some positive management, but sea level rise will not necessarily have a negative impact.	T Jones / D Worrall	21-Oct-10	Section 3.3.4 of the ER has been updated to reflect that a positive outcome may also occur to some sites in response to sea level rise.	P.Brunner	03/11/2010
4.	Strategic Environmental Assessment - General comment. In some instances where HTL has been identified as the preferred policy option (e.g. PDZ Unit 5.7), this is currently recorded as having neutral impact even though it may result in coastal squeeze and loss of intertidal habitat. Wherever coastal habitat is being lost because of a HTL policy, this will need to be classified as a negative impact and compensated for. Furthermore, the same is applicable where a NAI policy has been established for a currently defended section of coastline, as the still operative coastal defences will exacerbate and accelerate loss in coastal habitat.	T Jones / D Worrall	21-Oct-10	A major generic assumption of HTL is an adverse impact on such features as intertidal habitat through coastal squeeze. We have assessed HTL and all other management options at the policy unit level take into account the specific interest features, location and surrounding influences (e.g. built environment). However, the major environmental interest feature for PU 5.7 is the watercourse associated with the Afon Teifi SSSI which would not be influenced by a policy of HTL including associated fluvial processes. In regards to NAI and existing defences, the level of impact will depend on the nature conservation interests behind the defences.	P.Brunner	03/11/2010
4.	CCW would expect to see a section about the receptor 'Earth Heritage, Soils and Geology' for each Policy Development Zone that has geological SSSIs (and GCR sites – see note on Table 2.2 above).	T Jones / D Worrall	21-Oct-10	Section 4 of the ER has been updated to include a section on geology and geomorphology under the impacts for each PDZ.	P.Brunner	03/11/2010
Table 4.1	CCW welcomes comparison of the SEA objectives against both themselves and against other SEA objectives, to determine the level of conflict likely to arise as a result of the SMP policy decision-making. However, Table 4.1 is unclear. Why are there two rows against each objective? Why are there (differing) impacts when the SEA objectives are assessed against themselves? A key to deciphering this Table would be invaluable.	T Jones / D Worrall	21-Oct-10	As stated in Section 4 of the ER - Where there is no conflict or the objective supports the achievement of another objective, the row is highlighted green (row 1), whereas conflict is highlighted in amber (row 2). Where there is no conflict, but no expected integration between the objectives, the row has been highlighted in blue indicating neutral or no effect on achievement of the objective. However, different conflicts can occur for the objectives in response to both positive and negative outcomes. For example between natural environment objectives and human related objectives, allowing natural processes to occur (and the resulting development and extension of new or different habitats) can result in the loss of human assets (built heritage, archaeology, infrastructure, settlements). A key has been provided in Section 4.	P.Brunner	03/11/2010
4.2.122, 4.2.137, 4.2.162, 4.2.215 and 4.2.270	PDZs 10, 11, 12, 16 and 20. CCW is encouraged to see recognition of coastal squeeze as defences are maintained to protect transport infrastructure (rail and road). Throughout CCW's involvement in the SEA process for the West of Wales SMP2, we have raised concerns about the constraints that rail infrastructure places on the optimal management of the coastline and we raise the point again here. Coastal squeeze caused by railway infrastructure needs to be recorded and compensated for.	T Jones / D Worrall	21-Oct-10	Noted. However, railway authorities only have short term plans with their key objective to protect railway infrastructure and although the SEA and SMP can record the potential impacts on the environment from such infrastructure (e.g. coastal squeeze of habitats), compensation of habitat will need to be undertaken by the railway authority.	P.Brunner	03/11/2010
4.3	WFD Assessment. CCW is encouraged to see WFD assessment of the SMP2 policies for each PDZ.	T Jones / D Worrall	21-Oct-10	Noted.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Table 4.24	While this table provides interesting consideration of secondary, cumulative and synergistic impacts, it does not adequately consider the implications of the relevant plans, programmes and policies. Only a few plans, programmes and policies are mentioned and their reference seems rather tokenistic. As just two examples, there is no consideration of the Pwllheli Flood Pilot Study, and no reference to Pembrokeshire National Park Management Plan under landscape character and visual amenity.	T Jones / D Worrall	21-Oct-10	Table 4.24 has been updated to reflect more consideration of the plans, programmes and policies.	P.Brunner	03/11/2010
4.5.1	Biodiversity, flora and fauna. CCW welcomes continued reference to the Habitats Regulations Assessment throughout the document. We also welcome specific recognition of the impacts of the SMP2 policies on SSSI interest features and BAP habitats. While compensatory habitat is not legally required for SSSI designations, there is an obligation to conserve and enhance their protected features. The loss of coastal habitat threatens the achievement of "no net loss" targets for coastal ecosystems highlighted in the UK Biodiversity Action Plan.	T Jones / D Worrall	21-Oct-10	Noted. However, although compensatory habitat is not legally required for SSSI designations, the majority of interest features are associated with SPAs, SACs. As such, adverse affects associated with <i>Natura 2000</i> sites and the requirement of compensatory habitat will also benefit the SSSI interest feature components of the <i>Natura 2000</i> designations.	P.Brunner	03/11/2010
4.5.4	Earth Heritage, Soils and Geology. NAI policy has been assessed as having a neutral or a negative impact on geology in places. Mitigation should be suggested for this issue in the same way that it has been for Historic Environment assets that are likely to disappear/be impacted, that is there should be a policy of documenting and recording before loss. CCW believes the assessment of neutral impact on geology to be incorrect – the SEA objective is "to support natural processes and maintain geological exposures throughout nationally designated geological sites". CCW feels strongly that such exposures would not be maintained if they are subject to erosion and thus the impact would be a negative one. This could also apply to areas where sea level rise may result in geological exposure no longer being accessible.	T Jones / D Worrall	21-Oct-10	Although there is no major mitigation strategy available for geological sites, we have included those sites which would benefit from documenting and recording in Section 5 of the ER. The continued natural exposure of geological sites is of extreme importance to the SMP2, and those sites in which NAI will allow continued exposure has been classified as neutral as it will maintain the 'status quo' as SMP policy has not influenced the outcome / integrity of the interest feature. For those sites, which may be impacted upon by sea level rise, this may only occur along the toe of cliffs etc and not impacting upon the whole geological interest feature.	P.Brunner	03/11/2010
4.5.6	Landscape character and visual amenity. CCW welcomes consideration of the impact that SMP2 policies can have on landscape character and visual amenity. HTL policies will require more substantial coastal protection in the future. Landscape impacts are already an issue and will be even more so in future. While CCW would agree that sensitive and appropriate design of HTL actions can help to reduce the scale of any impacts associated with SMP2 policies", we would encourage use of a land/seascape assessment approach. Further information on this topic can be found in CCW's report on the impact of sea defences on landscape.	T Jones / D Worrall	21-Oct-10	Noted.	P.Brunner	03/11/2010
5.	Monitoring and mitigation. We welcome the clear rationale behind the need for monitoring and its incorporation into the Action Plan. We also welcome and support the key environmental monitoring actions identified and look forward to seeing further progress made in linking the SMP2 to ongoing SSSI and BAP monitoring.	T Jones / D Worrall	21-Oct-10	Noted.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
5.	Where MR or HTL policies have been identified as having the potential to impact on the designated sites, mitigation (or compensation under the Habitats Regulations) have been suggested. This includes habitat creation. While this in fine in principle, CCW has reservations about the practical viability of creating intertidal habitat which would likely impact on other (currently) terrestrial features of interest that are designated features, BAP habitats or indeed Phase II potential SSSI. Mitigation for loss of other assets, e.g. transport infrastructure, may itself have impacts on other habitats or features. Newgale (PDZ 2) is a classic example of this. CCW is concerned to ensure that suggested mitigation measures do not themselves have adverse environmental impacts.	T Jones / D Worrall	21-Oct-10	Suggested mitigation measures for a receptor such as BAP habitats (e.g. habitat creation) for the West of Wales SMP2 would themselves require detailed site specific feasibility studies to ensure no long-term impact to other receptors would occur in response to mitigation.	P.Brunner	03/11/2010
Appendix A	We would make a general comment that there are a lot of typo/spelling errors.	T Jones / D Worrall	21-Oct-10	Further spell checking has been undertaken to remove typos. This has also been undertaken for the other assessment tables (Annex B,C,D).	P.Brunner	03/11/2010
Appendix C	CCW has significant concerns as to how the level of impact on PUs has been recorded for some management policies. As one example, PUs 5.5 and 5.7 (Afon Teifi) have a HTL policy for all three epochs that will result in coastal squeeze and loss of intertidal habitat. This is currently recorded as a neutral impact. CCW feels strongly that an impact resulting in loss of an SSSI feature or BAP habitat should not be considered neutral. CCW would suggest further discussions between interested parties to reconsider the impacts on SSSI designations. As a point of interest, for these PUs the HTL policy is recorded as having a major negative impact on the corresponding BAP habitat.	T Jones / D Worrall	21-Oct-10	As previously noted, a major generic assumption of HTL is an adverse impact on such features as intertidal habitat through coastal squeeze. We have assessed HTL and all other management options at the policy unit level take into account the specific interest features, location and surrounding influences (e.g. built environment) associated with SSSIs and BAPs. However, the major environmental interest feature for PU 5.7 is the watercourse associated with the Afon Teifi SSSI which would not be influenced by a policy of HTL including associated fluvial processes. However, for BAP habitats such as sandflat and mudflats could be directly impacted upon by coastal squeeze along the same policy units.	P.Brunner	03/11/2010
Appendix D - general	CCW makes a general comment that mitigation information is missing from many locations where adverse impact is recorded against all three epochs. If habitat recreation is not appropriate (e.g. PU 11.10, loss of coniferous woodland or PU 15.6, loss of improved grassland) this should be explained.	T Jones / D Worrall	21-Oct-10	Appendix D has been updated to reflect this response. Those sites of improved grassland are actually coastal and floodplain grazing marsh based on CCW BAP classification and thus we have changed the classification name accordingly (see further comments below on improved grassland).	P.Brunner	03/11/2010
Appendix E Scoping Report	CCW has made two previous responses to the SEA scoping report (March and September 2010).	T Jones / D Worrall	21-Oct-10	Noted.	P.Brunner	03/11/2010
Other comments	CCW would have expected the draft Environment Report to have given a strategic and policy context, with reference to key international, national, regional and local relevant policies, programmes and plans and consideration of how these have been taken into account. A list of such plans was given in CCW's initial response to the SEA draft scoping report (date). We would also expect to see some reference to uncertainties and risks which may impact on the SEA process.	T Jones / D Worrall	21-Oct-10	Table 4.24 has been updated to reflect more consideration of the plans, programmes and policies.	P.Brunner	03/10/2010
Other comments	Indirect impacts to coastal processes, sediment transport pathways, rates and budgets, etc. may result from the implementation of HTL or even MR policies, therefore assessment of potential adverse effects on coastal processes should be included within the SEA.	T Jones / D Worrall	21-Oct-10	Indirect impacts to coastal processes, sediment transport pathways, rates and budgets associated with the implementation of HTL or even MR policies, has been taken into consideration through the development of the main SMP report and associated appendices such as the coastal process report (Appendix C) and policy scenario assessments (Appendix E). The SEA has used this information for some policy units for clarification when undertaking the assessment.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
PDZ 1-4 (Pembroke Marine SAC)	Grey seals are a feature of the Pembrokeshire Marine SAC. Loss of intertidal habitat could have significant impact because pupping beaches and haul-out area may reduce in size and number, thereby impacting on long term population viability and undermining Conservation Objectives for this feature in the long term.	T Jones / D Worrall	21-Oct-10	There will be no loss of intertidal habitat for PDZ 1 and 4 based on the HRA, thus no impact upon pupping beaches and haul-out area. There will be an impact to the Pembrokeshire Marine SAC and thus grey seal habitat which has been noted in the ER for PDZ 2 and PDZ 3.	P.Brunner	03/11/2010
Table 3.1: PU 16.8, Llanddwyn Island	We would suggest that the former Pilots' Cottages are not immediately at risk from sea level rise, ditto the lighthouse.	T Jones / D Worrall	21-Oct-10	Table 3.1 updated and Appendix A of the ER updated.	P.Brunner	03/11/2010
Table 3.1: PU 17.14, Porth Dafarch, South Stack and Gogarath Bay	These structures are very unlikely to be subject to impact through increased sea level rise. They are located on hard Precambrian sea cliffs.	T Jones / D Worrall	21-Oct-10	Table 3.1 updated and Appendix A of the ER updated.	P.Brunner	03/11/2010
PDZ 3, Abermaw SSSI	Abermaw SSSI is already suffering annual losses to the sea due to erosion. The policy for all 3 epochs is NAI. There should be mitigation (documenting and recording before loss) for this site, as there is for many Historic Environment assets through the SMP area.	T Jones / D Worrall	21-Oct-10	Documented recoding has been noted as mitigation for this site in the ER and Appendix C.	P.Brunner	03/11/2010
4.2.124: PDZ 10, Upper Borth to Tonfanau	The fixed dune grassland on the frontage of PU 10.15 (Penllyn) and the marshy grassland behind that supports breeding Lapwing (all SSSI interest) could be lost through erosion and inundation under the MR policy.	T Jones / D Worrall	21-Oct-10	The level of impact associated with MR such as erosion will depend on the design and scope of the planned managed realignment for this site which is currently unknown. If a breach was to occur then there would be possible inundation of the marshy grassland which may result in a moderate adverse impact. However, this would be mitigated and thus reduce the level of impact associated with inundation.	P.Brunner	03/11/2010
4.2.126: PDZ 10, Upper Borth to Tonfanau	The MR policy in PU 10.15 (Penllyn) could result in the loss of BAP habitats and species: Sand Dune, Coastal and Floodplain grazing marsh, breeding Lapwing <i>Vanellus vanellus</i> , <i>Dactylorhiza purpurella</i> subsp. <i>cambrensis</i> , <i>Oenanthe fistulosa</i> .	T Jones / D Worrall	21-Oct-10	The level of impact associated with MR will depend on the design and scope of the planned managed realignment for this site which is currently unknown. However any adverse impact to BAP habitats and species for this site would be mitigated and thus reduce the level of impact.	P.Brunner	03/11/2010
	Improved grassland seems to be referred to as a BAP habitat.	T Jones / D Worrall	21-Oct-10	Reference to improved grasslands as BAP habitat is actually coastal and floodplain grazing marsh based CCW BAP habitat classification. Appendix D and the ER has been updated accordingly.	P.Brunner	03/11/2010
ASS	The expression 'broadleaved mixed Yew woodland' is meaningless in the context of most of Mid and North Wales. This phrase is used throughout this section. 'Semi-natural broadleaved woodland' would be more appropriate.	T Jones / D Worrall	21-Oct-10	For this SEA we are using the BAP classification of habitats which includes broadleaved mixed Yew woodland to reduce confusion.	P.Brunner	03/11/2010
4.2.137: PDZ 11, Tonfanau to Mochras	PU 11.11 (Penmaenpool) was referred to as 11.12 (Penmaenpool) in the PDZ11 Main Report that discussed the management policies. Please clarify which PU is being referred to.	T Jones / D Worrall	21-Oct-10	The policy units labelled in the ER and HRA are correct and the current versions as of November 2010.	P.Brunner	03/11/2010
4.2.138: PDZ 11, Tonfanau to Mochras	Heathland is mentioned as being potentially lost from PU 11.13 (Upper Estuary) due to the MR policy. CCW is unclear where the heathland referred to is located.	T Jones / D Worrall	21-Oct-10	The heathland area is within the Meirionnydd Oakwoods and Bat Sites SAC.	P.Brunner	03/11/2010
4.2.139: PDZ 11, Tonfanau to Mochras	Please clarify what PU 11.11 refers to. The PDZ 11 Main Report omits 11.11, going straight from 11.10 (Mawddach South) to 11.12 (Penmaenpool).	T Jones / D Worrall	21-Oct-10	The policy units labelled in the ER and HRA are correct and the current versions.	P.Brunner	03/11/2010
4.2.139: PDZ 11, Tonfanau to Mochras	The MR policy for PU 11.9 (Fegla) may result in the loss of the SSSI interest and SAC feature of Arthog bog (BAP habitat Lowland Raised Bog). This should be made clear.	T Jones / D Worrall	21-Oct-10	The level of impact associated with MR will depend on the design and scope of the planned managed realignment for this site which is currently unknown, this is reflected in the minor negative impact for this site. However, appropriate mitigation will be implemented to reduce major adverse impacts.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
4.2.140: PDZ 11, Tonfanau to Mochras	Honeycomb worm Sabellaria alveolata reef is present within PU 11.1 (Rola) and PU 11.3 (Friog Cliffs) and is found at the mid level of the intertidal zone. If HTL is pursued in these units and sea levels rise then coastal squeeze of the intertidal habitats may occur, making conditions less favourable for Sabellaria.	T Jones / D Worrall	21-Oct-10	The current defence along these policy units is of high ground and will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy.	P.Brunner	03/11/2010
4.2.141: PDZ 11, Tonfanau to Mochras	PU 11.13 (Mawddach North) is referred to as 11.14 in the PDZ 11 Main Report. PU 11.15 (Barmouth North) is referred to as 11.16 in the PDZ 11 Main Report. PU 11.17 (Egryn Marsh) is referred to as 11.18 in the PDZ 11 Main Report. PU 11.18 (Sunnysands) is referred to as 11.12 in the PDZ 11 Main Report. The BAP habitat Lowland Raised Bog may be lost from PU 11.9 (Fegla) if MR is pursued.	T Jones / D Worrall	21-Oct-10	The policy units labelled in the ER and HRA are correct and the current versions as of November 2010.	P.Brunner	03/11/2010
4.2.143: PDZ 11, Tonfanau to Mochras	PU 11.1 is mentioned twice.	T Jones / D Worrall	21-Oct-10	Noted and ER updated.	P.Brunner	03/11/2010
4.2.155: PDZ 12, Mochras to Pen ychain	HTL for PU 12.6 (Landanwg headland) could impact on the long term viability of the Sabellaria reef, as the mid level of the intertidal zone is subject to coastal squeeze with SLR.	T Jones / D Worrall	21-Oct-10	The policy of HTL for PU 12.6 has been assessed as major negative impact for some interest features already, however the impact as well to the Sabellaria reef has also been noted in the ER.	P.Brunner	03/10/2010
4.2.155: PDZ 12, Mochras to Pen ychain	PU 12.14 (Borth y Gest) is numbered 12.15 in the PDZ 12 Main Report. PU 12.17 (Criccieth Shingle Banks) is named Morfa Bychan in the PDZ 12 Main Report.	T Jones / D Worrall	21-Oct-10	The policy units labelled in the ER and HRA are correct and the current versions as of November 2010.	P.Brunner	03/11/2010
4.2.156: PDZ 12, Mochras to Pen ychain	Improved grassland and arable horticulture appear to be referred to as BAP habitat. The list of BAP habitats should include sand dune and salt marsh.	T Jones / D Worrall	21-Oct-10	Reference to arable horticulture as BAP habitat has been removed from the assessment (Appendix D). CCW has provided Royal Haskoning the BAP habitats, however the data is constructed from the Phase 1 dataset with the broad habitat types of littoral sediment including saltmarsh and supralittoral sediment including the coastal sand dunes. Detailed assessment for these BAP features for each policy unit is quite complex, although these features are associated with some SSSIs / <i>Natura 2000</i> sites of the West of Wales which have been assessed in the SEA and HRA. However, we have extracted the total saltmarsh, dune, intertidal mud and intertidal sand areas by PU and epochs to enable a broad assessment of the policies on these features.	P.Brunner	03/11/2010
4.2.170 to 4.2.180: PDZ 13, Pen ychain to Trwyn Cilan	We are surprised that there is no cross-reference to Pwllheli Flood Pilot Study (WAG-initiated and supported by Cyngor Gwynedd, EAW, CCW, Dwr Cymru & Network Rail). This project is considering all scenarios and considering the impact of fluvial and coastal flooding issues.	T Jones / D Worrall	21-Oct-10	Table 4.24 has been updated to reflect more consideration of the plans, programmes and policies.	P.Brunner	03/10/2010
4.2.211: PDZ 16, Trwyn Dylan to Llanfairfechan	It is unlikely that the Pilots' Cottages at Llanddwyn would be impacted by sea level rise (see comment on Table 3.1).	T Jones / D Worrall	21-Oct-10	Noted, checked and ER updated.	P.Brunner	03/11/2010
4.2.226: PDZ 17, Teyn y Parc to Twyn Cliperau	It is very unlikely that Ellen's Tower and North Stack Fog Station would be affected by erosion as they are located on very hard Precambrian cliffs, more than 30 metres above HWOT (see comment on Table 3.1 above).	T Jones / D Worrall	21-Oct-10	Noted, checked and ER updated.	P.Brunner	03/11/2010
Page 92: PDZ 19	The heading of PDZ 19 does not make sense. It should read 'East Bays Anglesey'.	T Jones / D Worrall	21-Oct-10	The heading of ER has been corrected to read East Bays Anglesey.	P.Brunner	03/11/2010
Appendix A: ID 397, Pwllheli	This needs cross reference to the Pwllheli Flood Pilot Study (see comment on para 4.2.170 above).	T Jones / D Worrall	21-Oct-10	Table 4.24 has been updated to reflect more consideration of the plans, programmes and policies.	P.Brunner	03/10/2010
Appendix A: ID 570 (South Stack) & 573 (Gogarth Bay)	It is very unlikely that Ellen's Tower and North Stack Fog Station would be affected by erosion as they are located on very hard Precambrian cliffs, more than 30 metres above HWOT (see comment on Table 3.1 above).	T Jones / D Worrall	21-Oct-10	Noted, checked and Appendix A updated.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Appendix C	A general comment is that when adverse impact is indicated across all three epochs, the mitigation column is frequently blank, e.g. PU 11.8 (Mawddach Estuary) or 12.13 (Morfa Harlech). These two particular cases both involve SACs, where this omission is surprising. In addition, the fifth column (scale) seems to be confused with SACs listed as 'local' while SSSIs are labelled as 'international'. All SACs by definition are international.	T Jones / D Worrall	21-Oct-10	Appendix C has been updated to incorporate mitigation for all major negative impacts for designations. For those SSSI sites which are associated with a GCR site the scale of labelling is International / National to reflect the international status of GCRs.	P.Brunner	03/11/2010
Appendix C: PU 6.1, Aberarth - Carreg Wyla	CCW welcomes the NAI strategy for Madryn Fields.	T Jones / D Worrall	21-Oct-10	Noted.	P.Brunner	03/11/2010
Appendix C: PU 10.15, Dyfi	The assessment table should record a major negative impact on the SSSI (see note on para 4.2.124 above).	T Jones / D Worrall	21-Oct-10	The level of impact associated with MR such as erosion will depend on the design and scope of the planned managed realignment for this site which is currently unknown. If a breach was to occur then there would be possible inundation of the marshy grassland which may result in a moderate adverse impact. However, this would be mitigated and thus reduce the level of impact associated with inundation.	P.Brunner	03/11/2010
Appendix C: PU 10.18 to 11.3 Glannau Tonfanau i Friog	In the fifth column of the table 'Benefits/Why is issue important?' the text has been curtailed.	T Jones / D Worrall	21-Oct-10	The text in the fifth column of the table 'Benefits/Why is issue important for PU 10.18 appears fine.	P.Brunner	03/11/2010
Appendix C: PU 10.18, Glannau Tonfanau i Friog	For PU 10.18 (Dysynni Estuary) Broadwater SSSI the MR policy in epochs 2 and 3 could have a negative impact on the existing SSSI interest.	T Jones / D Worrall	21-Oct-10	Within the Dysynni, the plan intent would be for Managed Realignment (MR) of defences for the second and third epochs, however the level impacts (either positive or negative) will depend on the scope and design of MR. If taking the long-term erosion line as potential MR extents, than with the exception of two locations, MR would not significantly impact upon the SSSI extents. Those areas in which erosion lines extend significantly past the SSSI boundary (both associated with open / unconstrained landscapes), there may be potential for habitat creation as part of MR.	P.Brunner	03/11/2010
Appendix C: PU 10.18, Glannau Tonfanau i Friog	For PU 10.18 (Dysynni Estuary) Glannau Tonfanau I Friog SSSI, why are there two sets of policy recommendations? For the biodiversity, flora and fauna the policies HTL, MR, MR have been identified. However, for the Earth heritage, soils and geology (GCR) the policies HTL, HTL, HTL have been selected. HTL, MR, MR are the policies selected in the PDZ 10 Main Report.	T Jones / D Worrall	21-Oct-10	Appendix C has been updated to reflect this response with HTL, MR and MR for PU 10.18 for both biological and geological features.	P.Brunner	03/11/2010
Appendix C: PU 11.1 to 11.2, Glannau Tonfanau i Friog	The policy recommendations for PU 11.1 and PU 11.2 (Rola/Llwyngwrl) Glannau Tonfanau i Friog SSSI are exactly opposite. Why are they both referred to?	T Jones / D Worrall	21-Oct-10	Appendix C has been updated to reflect this response with a separate assessment for 11.2.	P.Brunner	03/11/2010
Appendix C: PU 11.1 to 11.2, Glannau Tonfanau i Friog	If erosion and therefore rollback of the high ground is prevented as a result of the SMP2 policy then the SMP2 policy may lead to the loss of the Sabellaria reef SAC feature, SSSI interest and BAP habitat.	T Jones / D Worrall	21-Oct-10	The current defence along these policy units is of high ground and will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy.	P.Brunner	03/11/2010
Appendix C: PU 11.3, Glannau Tonfanau i Friog	For PU 11.3 (Friog Cliffs) Glannau Tonfanau i Friog SSSI – if erosion and therefore rollback of the high ground is prevented as a result of the SMP2 policy then the SMP2 policy may lead to the loss of the Sabellaria reef.	T Jones / D Worrall	21-Oct-10	The current defence along these policy units is of high ground and will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Appendix C: PU 11.5, Mawddach Estuary	For PU 11.5 (Ro Wen Spit) Aber Mawddach SSSI, MR could result in the loss of SSSI features.	T Jones / D Worrall	21-Oct-10	A HTL policy has been suggest for the first epoch to enable the protection of the railway followed by MR for the second and third epochs. However, the level of impact associated with MR on the Ro Wen Spit and Aber Mawddach SSSI is currently unknown. However, appropriate mitigation (e.g. habitat creation) will be implemented to reduce major negative adverse impacts on the SSSI for this site.	P.Brunner	03/11/2010
Appendix C: PU 11.9, Mawddach Estuary	For PU 11.9 (Fegla) Aber Mawddach SSSI, MR could lead to the loss of SSSI interest (Arthog bog), therefore negative impact.	T Jones / D Worrall	21-Oct-10	The level of impact associated with MR will depend on the design and scope of the planned managed realignment for this site which is currently unknown, this is reflected in the minor negative impact for this site. However, appropriate mitigation will be implemented to reduce major negative adverse impacts.	P.Brunner	03/11/2010
Appendix C	For policy units 11.11, 11.12, 11.13, 11.14, 11.19 and 11.20, it is unclear where the numbers refer to as the PU numbers do not correspond with the Main Report for PDZ 11.	T Jones / D Worrall	21-Oct-10	The policy units labelled in the ER and HRA are correct and the current versions as of November 2010.	P.Brunner	03/11/2010
Appendix C: PU 12.5, Morfa Dyffryn	For PU 12.5 (Llandanwg Dunes) Morfa Dyffryn SSSI, MR may result in the loss of SSSI Sand Dune interest.	T Jones / D Worrall	21-Oct-10	MR for this site will specifically avoid further extension of hard defence along this frontage with the aim to allow some control but also natural roll back of the dune system so that present management avoids future commitment to extending of hard defence and allowing natural processes to prevail. Thus, the policy will have more of positive impact than a negative as reflected in Appendix C.	P.Brunner	03/11/2010
Appendix C: PU 12.12, Morfa Harlech	PU 12.12 is not in the PDZ 12 Main Report. Does it refer to the Upper Dwyryd Estuary numbered 12.11 in the Main Report? If so, the policy should be MR in the first epoch. The policy description also refers to dunes, which does not apply to the Upper Dwyryd estuary.	T Jones / D Worrall	21-Oct-10	The policy units labelled in the ER and HRA are correct and the current versions as of November 2010. PU 12.12 refers to Penrhyndeudraeth Headland and policy is NAI for all three epochs.	P.Brunner	03/11/2010
Appendix C: PU 16.7, Newborough Warren	CCW welcomes the NAI strategy for Newborough Forest frontage.	T Jones / D Worrall	21-Oct-10	Noted.	P.Brunner	03/11/2010
Appendix D: PU 10.15, Penllyn	Major negative impact on dunes, breeding Lapwing and marshy grassland.	T Jones / D Worrall	21-Oct-10	The level of impact associated with MR such as erosion will depend on the design and scope of the planned managed realignment for this site which is currently unknown. If a breach was to occur then there would be possible inundation of the marshy grassland which may result in a moderate adverse impact. However, this would be mitigated and thus reduce the level of impact associated with inundation.	P.Brunner	03/11/2010
Appendix D	For PU 10.16, 10.18, 10.19, 11.1, 11.3, 11.4, 11.6, 11.9, 11.10, 11.12, 11.13, 12.2, 12.3, 12.4, 12.5, 12.6, 12.8, 12.9, 12.13 – improved grassland and bracken are not BAP habitats.	T Jones / D Worrall	21-Oct-10	Based on CCW BAP habitat classification, improved grassland for BAP priority habitats in Wales are coastal and floodplain grazing marsh. As braken are a broad BAP habitat these have been left in the assessment.	P.Brunner	03/11/2010
Appendix D: PU 11.1 (Rola), 11.3 (Friog Cliffs), 12.6 (Llandanwg Headland)	Should include major negative impact on Sabellaria alveolata reef BAP habitat.	T Jones / D Worrall	21-Oct-10	The current defence along these policy units is of high ground and will be maintained in order to protect the railway. As the rocky foreshore is constrained by the high ground, the loss of biological SSSI interest features associated with reefs for example, will occur naturally and not as a result of the SMP2 policy.	P.Brunner	03/11/2010
Appendix D: PU 11.9, Fegla	MR in this PU could have a major negative impact on BAP habitat Lowland Raised Bog.	T Jones / D Worrall	21-Oct-10	A major negative impact has been previously assessed in Appendix D for PU 11.9 (fen_marsh_swamp_region BAP habitat) to take into account the potential impact MR to the Bog. However, as stated previously the level of impact will depend on the scope and design of MR which however will be mitigated against to reduce the level of impact on the freshwater bog.	P.Brunner	03/11/2010

Paragraph reference	Comment	Name	Date	RH Response	Name	Date
Appendix D	PU 11.11, 11.12, 11.13, 11.14, 11.15, 11.16, 11.17, 11.18, 11.19 - clarify where these units refer to.	T Jones / D Worrall	21-Oct-10	The policy units labelled in the ER and HRA are correct and the current versions as of November 2010.	P.Brunner	03/11/2010
Appendix D: PU 11.12, Upper Estuary	MR in the upper section of the Mawddach estuary could create reedbed, marshy grassland, salt marsh and therefore potential major positive impact.	T Jones / D Worrall	21-Oct-10	This has already been assessed a major positive impact in regards to the potential for MR to create habitat.	P.Brunner	03/11/2010
Appendix D: PU 12.5, Llandanwg Dunes	Policy recommendations in epoch 1 for improved grassland and littoral rock region is different. MR in this PU will lead to loss of SSSI sand dune interest.	T Jones / D Worrall	21-Oct-10	Noted and Appendix D of the ER has been updated.	P.Brunner	03/11/2010