



Environment
Agency
Asiantaeth yr
Amgylchedd

Statement of Environmental Particulars for The West of Wales Shoreline Management Plan 2

Issued February 2012

Contents

Section 1 – Introduction	2
Purpose of this SEA Statement of Environmental Particulars	2
Section 2 – Background	4
The West of Wales Shoreline Management Plan 2.....	4
Strategic Environmental Assessment.....	7
Section 3 - Alternatives	11
Section 4 – Integration of Environmental Considerations	24
The Scoping Report (December 2009).....	24
The Environmental Report (November 2010).....	25
Section 5 – Influence of the Environmental Report	68
Section 6 – Summary of Key Consultation and Responses/Actions	70
Section 7 – Environmental Monitoring Measures for the Implementation of this SMP2	74
Effects on the integrity of international sites	75
Effects on Condition of SSSIs and BAP Habitats	79
Investigation of Historic Environment and Geological Sites	81
Risks.....	85
References	86
Annex I – Consultation Responses/ Actions for the Environment Report	87
Annex II – MR Policies Impacting Key SSSI Freshwater / Terrestrial Habitats	90
Annex III – RIGS and GCR Sites	92

Section 1 – Introduction

This Statement of Environmental Particulars (SoEP) indicates how environmental considerations and the views of interested parties (consultees) were taken into account during the preparation of the second Shoreline Management Plan (SMP) for the West of Wales. It explains how the West of Wales Coastal Group and their partners (local authorities, Environment Agency Wales, Countryside Council for Wales (CCW), Cadw and other organisations) selected the preferred options within the plan. This statement goes on to describe the proposed mitigation and monitoring procedures that have been set in place in order to successfully manage and monitor the significant environmental effects of implementing the plan.

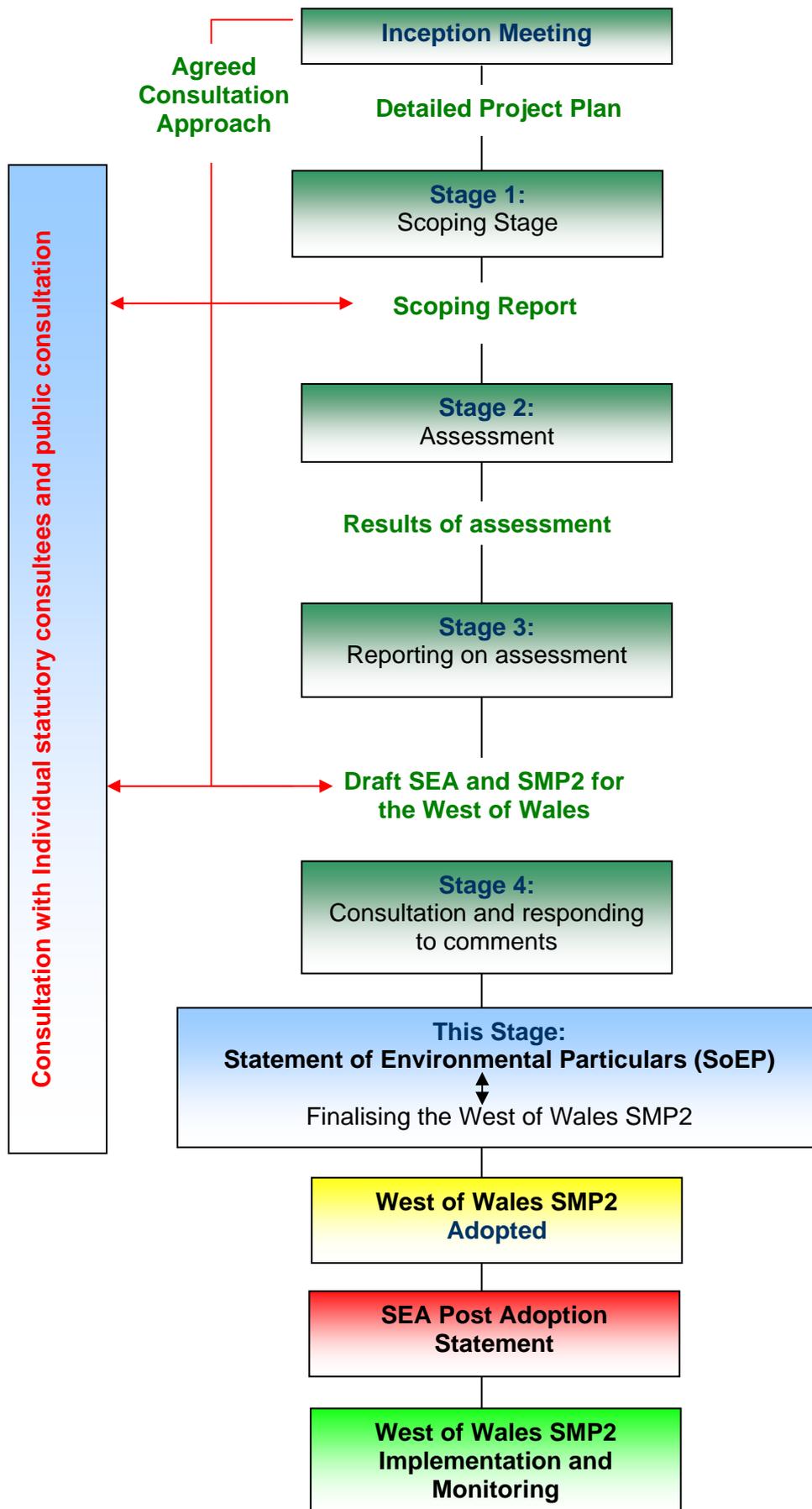
Purpose of this SEA Statement of Environmental Particulars

This Statement of Environmental Particulars is a requirement under the Environmental Assessment of Plans and Programmes Regulations 2004 (Regulation 16). It is a stand alone document that sets out how the findings of the Strategic Environmental Assessment (SEA) have been taken into account in the development of the West of Wales SMP2. It should be made clear that the SoEP document is additional to the SEA ER, and is intended only to provide information where the findings of the ER have changed as a result of SMP policy changes and/or as a result of request for clarifications or updates to findings where they have changed (Please read **Annex I** – Consultation Responses, in conjunction with this SoEP). **Figure 1.1** highlights the stages of the SEA including where the SoEP fits in the SEA approach for strategic plans such as SMPs.

This SoEP comprises of 7 sections of which this introduction forms Section 1. The remaining sections and appendices include:

- **Section 2** Background to the West of Wales SMP2;
- **Section 3** Alternatives (reasons for selecting the preferred policy plan);
- **Section 4** Integration of Environmental Considerations;
- **Section 5** Influence of the Environmental Report;
- **Section 6** Summary of Key Consultation and Responses / Actions for the Environmental Report; and
- **Section 7** Environmental Monitoring Measures for the implementation of this SMP2.
- **Annex I to III** Provides supporting information for this SoEP.

Figure 1.1 SEA Approach and Stages Undertaken for this SMP2. The stages are also the Environment Agency's internal procedure for SEAs.



Section 2 – Background

The West of Wales Shoreline Management Plan 2

An 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. The SMP for the West of Wales addressed these issues in the context of its location briefly described in this section of the SoEP. Full details of the environmental baseline are presented in the Scoping and Environmental Reports for the West of Wales SMP2.

Environment of the West of Wales SMP2

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 Lleyrn 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.

In addition to the Heritage Coast and cultural values, the West of 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. Protected sites in the West of Wales can be broadly categorised as:

- Special sites protected under international agreements – Wetlands of International Importance (Ramsar sites), Biosphere Reserves and Biogenetic Reserves;
- Natura 2000 sites protected under European Commission Directives – Special Areas of Conservation (SAC) and Special Protected Areas (SPAs);
- Special sites protected under UK law - Sites of Special Scientific Interest (SSSIs) and Marine Nature Reserves (MNRs); and
- Other special sites – National Nature Reserves (NNRs) and Local Nature Reserves (LNRs).

An overview summary of the designation and reserves present within the West of Wales SMP2 are presented in **Table 2.1**.

Table 2.1 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
Sites of Special Scientific Interest (SSSI)	40,466
National Nature Reserves (NNR)	6,027
Marine Nature Reserves (MNR)	1,324
Local Nature Reserves (LNR)	3,359

The combination of selected natural environmental assets, supported by natural processes, associated with this particular SMP creates a coastline of great value, with a tourism economy of national importance. However, these existing environmental assets could quite easily be damaged by inappropriate coastal defences.

Boundaries of the West of Wales SMP2

The West of Wales SMP2 is based on a division of the coast into 20 Policy Development Zones (PDZ), as presented in **Figure 2.1**.

Supporting policy for each PDZ is provided for three time periods (epochs). Epoch 1 covers the period from the present day to **2025**, epoch 2 from **2025 to 2055**, and epoch 3 from **2055 to 2105**.

Strategic Environmental Assessment

In order to ensure environmental considerations were integrated throughout the development of the SMP, a non-statutory SEA was undertaken following the requirements of the SEA Regulations (The SEA Directive 2001/42/EC is transposed into United Kingdom law by the Environmental Assessment of Plans and Programmes Regulations 2004) and the Environment Agency's internal SEA procedure (see **Figure 1.1**) (EA, 2010). This assessment seeks to ensure that any potentially significant effects of the SMP on the environment are considered throughout its development.

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 (as defined in Environmental Assessment of Plans and Programmes Regulations, SI 1633 2004) and SEA Sustainability Objectives presented in **Table 2.2**. 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 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 SEA process for the West of Wales SMP has included a Scoping Report; and an Environmental Report (ER) (**Appendix E** of the SMP).

Table 2.2 West of Wales SMP2 Sustainability Objectives and Indicators

SEA Receptors and Objectives	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 Receptors and Objectives	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.

SEA Receptors and Objectives	Features covered by the objective	Indicator	Target
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.
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.

Section 3 - Alternatives

This section sets out the reasons for selecting the preferred policy option for each PDZ (across all three epochs) in the light of other reasonable alternatives. Policy options available under the SMP are outlined in **Table 3.1** along with the potential generic implications of each option.

Table 3.1 Options used in SMP Development and Potential Generic Implications

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 recreation 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; • Loss of communities; • Uncontrolled flood/erosion risk to residential and commercial properties and infrastructure; • Loss of heritage assets; and • Uncertainty of effects and time for adaptation.

When considered in relation to the PDZs, policy options were ruled out immediately if they were not applicable or if it was obvious that there were no clear drivers but significant constraints. The long term policies or overall vision/intent for a particular PDZ and alternative options considered for the PDZs are presented below in **Table 3.2** (which should be read in conjunction with the SEA ER for specific details). For a detailed consideration of how SMP options were evaluated for each individual policy unit, please see **Appendix A** of the SMP. The Habitat Regulation Assessment Report (HRA) (October 2010, updated November 2011, February 2012) (**Appendix G**) for the West of Wales SMP2 also provides a detailed assessment of alternative solutions for the effects of the PDZs on *Natura 2000* sites.

Table 3.2 Long Term Policy Options (Vision) for PDZs Evaluated in the Environmental Report

Long Term Policy Option/Plan	Assessment Summary
PDZ 1 St Anns Headland to St Anns Head to Borough	
<p>The intention of the plan is to allow natural processes to prevail along the coastline within this PDZ through NAI.</p>	<p>The policy of NAI will enable the vegetated sea cliffs, an interest feature of the South Pembrokeshire Marine SAC, to develop in response to the wider coastal processes and will continue to provide a supply of sediment to intertidal and marine areas. The NAI will not affect the intertidal and subtidal rocky habitats (sea caves and reefs).</p> <p>There is the small community of St Brides, where there could be longer term risk to properties. This is seen as being manageable at a local scale. However, the plan recommends considering the removal of the wall along the back of this small bay to allow the development of a natural beach. Other issues arise in terms of access to the islands. The overall intent of No Active intervention would not prevent local improvement to the landing areas to ensure future use with sea level rise.</p> <p>No impacts are identified for <i>Natura 2000</i> sites or SSSI and BAP interest features as a result of coastal management policy for this PDZ.</p>
<p>Maintaining present management within this PDZ.</p>	<p>A relatively similar scenario as NAI for the whole PDZ.</p>
PDZ 2 Borough Head to Dinas Fach	
<p>The intent of the plan within the PDZ is to allow natural behaviour of the coast through NAI. Only in front of the various settlements does the intent change to sustain communities through intervention of HTL and MR. These will occur at the following locations:</p> <p>PU 2.2 (HTL, HTL, MR) Little Haven; PU 2.4 2 (HTL, HTL, MR) Southern</p>	<p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk (e.g. Black Point Rath Hillfort at Broad Haven (PU 2.7). The HTL and MR policies will overall provide long term protection of villages (e.g. Broad Haven and Little Haven) and infrastructure. 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 through MR.</p>

Long Term Policy Option/Plan	Assessment Summary
<p>and central Broad Haven; PU 2.5 (HTL, MR, NAI) Broad Haven North; PU 2.6 2 (HTL, HTL, MR) Haroldston Hill; PU 2.8 (HTL, MR, MR) Nolton Haven; PU 2.10 (MR, MR, MR) Newgale Sands south; PU 2.12 (MR, MR, MR) Newgale Village.</p>	<p>However, the policy of HTL within this PDZ does not significantly allow natural coastal processes to prevail in totality or for habitats such as intertidal sandflats to adapt under rising sea levels. Thus, impacts to <i>Natura 2000</i> sites (Pembrokeshire Marine SAC), SSSI interest features (intertidal habitats/communities of the Arfordir Niwgwyl-Aber Bach / Newgale to Little Haven Coast SSSI and St. Davids Peninsula Coast SSSI) and BAP habitats are expected as a result of coastal management policy for this PDZ.</p> <p>Erosion rates associated with the geological interest feature of the Arfordir Niwgwyl-Aber Bach / Newgale to Little Haven Coast SSSI to occur at a relatively slower rate.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>The overall conclusions that may be drawn are that a policy scenario of NAI for the whole PDZ fails to address the substantial threat to the economic, social and heritage value of the area. While the NAI policy could deliver some significant ecological benefits, the policy on its own fails to deliver a balanced sustainability of values for this PDZ.</p>
PDZ 3 Dinas Fach to Pen Anglas	
<p>The underpinning intent of the plan is to work towards a natural functioning coast through NAI, limiting any further intervention at the shoreline and supporting the important nature conservation and landscape values of the area. Only in front of the various settlements does the intent change to sustain communities through intervention of HTL and MR. These will occur at the following locations:</p> <p>PU 3.2 (HTL, HTL, MR) Lower Solva; PU 3.3 (HTL, HTL, HTL) Solva Harbour; PU 3.5 (HTL, HTL, HTL) Porth Clais inner; PU 3.8 (HTL, MR, MR) Whitesands bay; PU 3.9 (MR, MR, MR) Abereiddi; PU 3.10 (HTL, HTL, HTL) Porth Gain; PU 3.11 (HTL, MR, MR) Aber Castle.</p>	<p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk (e.g. the several prehistoric hill forts). The HTL and MR policies will overall provide long term protection of villages (e.g. Porth Gain), infrastructure and some historic sites.</p> <p>However, similar to PDZ 2, the policy of HTL within this PDZ does not significantly allow natural coastal processes to prevail in totality or for habitats such as intertidal sandflats to adapt under rising sea levels. Thus, impacts to <i>Natura 2000</i> sites (Pembrokeshire Marine SAC), SSSI interest features (intertidal habitats/communities of the St. Davids Peninsula Coast SSSI) and BAP habitats are expected as a result of coastal management policy for this PDZ.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>The overall conclusions that may be drawn are that a policy scenario of NAI for the whole PDZ fails to address the substantial threat to the economic, social and heritage value of the area. While the NAI policy could deliver some significant ecological benefits, the policy on its own fails to deliver a balanced sustainability of values for this PDZ.</p>

Long Term Policy Option/Plan	Assessment Summary
PDZ 4 Strumble Head to Pen y Bal	
<p>The intent of the plan within the PDZ is to allow natural behaviour of the coast through NAI. Only in front of the various settlements does the intent change to sustain communities through intervention of HTL and MR. These will occur at the following locations:</p> <p>PU 4.2 (HTL, HTL, HTL) Fishguard Harbour; PU 4.3 (HTL, MR, MR) The Parrog and Goodwick Moor; PU 4.5 (HTL, HTL, HTL) Hill Terrace; PU 4.6 (HTL, HTL, MR) Lower Town centre; PU 4.7 (HTL, HTL, HTL) Lower Town Quay; PU 4.12 (HTL, HTL, HTL) Cwm-yr-Eglwys; PU 4.14 (MR, MR, MR) Newport Parrog West; PU 4.15 (HTL, HTL, MR) Newport Parrog.</p>	<p>Although there will be sections of coastlines which will be managed through intervention, it is considered that given the distance to key international and national designate sites, that no habitat loss will occur there as a result of the policies for this PDZ and there will be no adverse effect on the integrity of these sites. MR potentially could lead to loss of some properties such as the Sailing Club at Newport, Parrog and BAP habitat. No impacts are identified for <i>Natura 2000</i> sites or SSSI interest features as a result of coastal management policy for this PDZ.</p> <p>The long term NAI policy will have an effect on some historic features which may be of risk from erosion. The HTL and MR policies will overall provide long term protection of various villages, infrastructure and some historic sites along the coastline of this PDZ.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>NAI for the whole PDZ would leave natural processes to dominate which would result in the encroachment of rising sea levels and long term impacts to villages and infrastructure, with no major advantages to nature conservation interest under a total policy of NAI for this particular PDZ.</p>
PDZ 5 Pen y Bal to Pencribach	
<p>The intent of the plan over the open coast is to allow natural behaviour of the coast through NAI. There would be a need for management through intervention of HTL and MR within the Teifi estuary along the following locations:</p> <p>PU 5.3 (MR, MR, MR) Poppit Dunes and Pen-yr-Ergyd; PU 5.8 (HTL, HTL, HTL) Coronation Drive.</p>	<p>The SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites would occur. HTL and MR policies could result in the loss of BAP habitats, although this could result in the creation of additional habitat. No impacts are identified for <i>Natura 2000</i> sites or SSSI interest features as a result of coastal management policy for this PDZ.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk (e.g. Promontory Fort (SM) at Castell Tre-Riffith (PU 5.1)). The HTL and MR policies will overall provide long term protection of villages (e.g. Cardigan), infrastructure (e.g. Coronation Drive) and some historic sites.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>NAI for the whole PDZ would leave natural processes to dominate which would result in the encroachment of rising sea levels and long term impacts to villages and infrastructure. There could be advantages to nature</p>

Long Term Policy Option/Plan	Assessment Summary
	conservation interests regarding BAP sites under a total policy of NAI for this particular PDZ, although the policy on its own would fail to deliver a balanced sustainability of values for this PDZ.
PDZ 6 Pencribach to New Quay Head	
<p>The intent of the plan over much of the frontage is to allow the natural development of the shoreline, supporting both the nature conservation and landscape values and also the important setting for the various communities. Within this is the intent to sustain communities through HTL and MR at the following locations:</p> <p>PU 6.2 (HTL, HTL, HTL) Aberporth; PU 6.4 (HTL, MR, MR) Tresaith; PU 6.6 (HTL, MR, MR) Llangrannog; PU 6.8 (HTL, NAI, NAI) Cwmttydu.</p>	<p>Similar to PDZ 5, the SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites and SSSIs would occur. MR policies could result in the loss of BAP habitats, although this could result in the creation of additional habitat. Beach shape and size may also be affected by HTL and MR.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk (e.g. Shipyards at Llangrannog (PU 6.6)). The HTL and MR policies will overall provide long term protection of Aberporth, Tresaith and Llangrannog.</p>
Alternative policy option of NAI for whole PDZ.	Similar to PDZ 5, NAI for the whole PDZ would leave natural processes to dominate which would result in the encroachment of rising sea levels and long term impacts to villages and infrastructure. There could be advantages to nature conservation interests regarding BAP sites under a total policy of NAI for this particular PDZ, although the policy on its own would fail to deliver a balanced sustainability of values for this PDZ.
PDZ 7 New Quay Head to Gilfach yr Halen	
<p>The aim of the plan is to sustain the community of New Quay, its important harbour area and sea front, together with the areas of beach through HTL and MR. In addition, the plan recognises the increasing difficulty in sustaining the frontage defence and the opportunity to restore the natural function of the bay towards Carreg Ddu. This would support shoreline nature conservation values, supporting adaptation in the future.</p>	<p>Similar to PDZ 6, the SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites and SSSIs would occur. HTL and MR policies could result in the loss of BAP habitats, although MR policies could result in the creation of additional habitat.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk. The HTL and MR policies will overall provide long term protection of New Quay Bay and Little Quay bay.</p>
Alternative policy option of NAI for whole PDZ.	Under a No Active Intervention scenario, the coastline around New Quay Bay and Little Quay bay would change quite significantly. The town around the Harbour is heavily dependant on its defences, although maintaining full protection to all areas of both bays in the long term is not considered sustainable. This was recognised in SMP1 and is not with current management approach and thus an adaptable approach was required for this PDZ.

Long Term Policy Option/Plan	Assessment Summary
PDZ 8 Gilfach yr Halen to Carreg Ti-pw	
<p>The aim of the plan is to sustain both the town of Aberaeron and its essential harbour area through HTL and MR, with the intent to allow natural development of the shoreline towards Llanrhystud Bay</p>	<p>Similar to PDZ 7, the SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites and SSSIs would occur. MR policies could result in the loss of BAP habitats, although this could result in the creation of additional habitat.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk (e.g. Weigh House Beach Parade (Listed Building) (PU 8.2)). The HTL and MR policies will overall provide long term protection of Aberaeron.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>The real issue over this section of coast is at Aberaeron. No Active Intervention is ruled out. The consequence of not defending is the effective loss of the town and the harbour. Aberaeron is identified as being vital to the well being of the region.</p>
PDZ 9 Carreg Ti-pw to Sarn Gynfelyn	
<p>The primary intent of the plan is to sustain defence at Aberystwyth through HTL and MR, while allowing the natural development of the coast in adjacent areas.</p>	<p>Similar to PDZ 8, the SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites and SSSIs would occur. MR policies could result in the loss of BAP habitats, although this could result in the creation of additional habitat.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk (e.g. Tramway at Aberystwyth (PU 9.2)). The HTL and MR policies will overall provide long term protection of Aberystwyth.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>No Active Intervention, while generally fulfilling objectives with respect to the natural function of large areas of the zone, would be unacceptable in relation to Aberystwyth. However, extending the present intent of management across the Aberystwyth area is equally shown not to meet core objectives.</p>
PDZ 10 Sarn Gynfelyn to Tonfanau	
<p>The whole zone is seen as having important interlinking issues. The most significant is in the policy for future realignment of the southern shore and rear defence to the Dyfi with only two locations along this PDZ having long term No Active Intervention policies (PU 10.4 Ynyslas and PU 10.19 Tonfanau).</p>	<p>There is potential for the ecological designated habitats (<i>Natura 2000</i> sites, SSSIs) interest features such as sandflats, saltmarsh, grassland to be adversely restricted in their natural development through HTL and MR. These policies could result in the loss of BAP habitats, although MR policies could result in the creation of additional habitat.</p> <p>Some historic sites (e.g. Dwellings (Listed Buildings) at Dyfi Valley (PU 10.6)) and infrastructure (e.g. railway lines) will be affected by MR.</p> <p>The HTL and MR policies will overall provide long term protection of villages and some historic sites along this PDZ.</p>

Long Term Policy Option/Plan	Assessment Summary
Alternative policy option of NAI for whole PDZ.	The overall conclusions that may be drawn are that a policy scenario of NAI for the whole PDZ fails to address the substantial threat to the economic, social and heritage value of the area. While the NAI policy could deliver some significant ecological benefits, the policy on its own fails to deliver a balanced sustainability of values for this PDZ.
PDZ 11 Tonfanau to Traeth Dyffryn	
<p>One major factor steering present management of the PDZ is the need to maintain the protection of Fairbourne (PU 11.4 – 11.9) and Barmouth (PU 11.14 – 11. 16) (and other key assets) through HTL and MR along with the additional following locations:</p> <p>PU 11.1 (HTL, HTL, HTL) Rola; PU 11.2 (MR, MR, MR) Llwyngwriil; PU 11.3 (HTL, HTL, HTL) Friog Cliffs; PU 11.10 (MR, MR, MR) Mawddach south; PU 11.11 (HTL, HTL ,HTL) Penmaenpool; PU 11.12 (HTL,MR, MR) Upper estuary; PU 11.13 (MR,MR,MR) Mawddach north; PU 11.18 (MR, MR, MR) Sunnysands; PU 11.19 (MR, MR, MR) Islawfordd.</p>	<p>There is potential for the ecological designated habitats (<i>Natura 2000</i> sites, SSSIs) interest features such as sandflats to be adversely restricted in their natural development through HTL and MR, which also applies to geological features. These policies could also result in the loss of BAP habitats, although MR policies could result in the creation of additional habitat.</p> <p>There is a potential reduction in the rate of exposure associated with the geological interest component of Glannau Tonfanau I Friog SSS.</p> <p>HTL will cause loss to 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. Loss of railway lines may occur in response to the proposed management interventions including railway lines at Barmouth (PU 11.15), Gwastaddgoed (PU 11.3), and Ro Wen (PU 11.4).</p> <p>The HTL and MR policies will overall provide long term protection of villages and some historic sites along this PDZ.</p>
Alternative policy option of NAI for whole PDZ.	The overall conclusions that may be drawn are that a policy scenario of NAI for the whole PDZ fails to address the substantial threat to the economic, social and heritage value of the area. While the NAI policy could deliver some significant ecological benefits, the policy on its own fails to deliver a balanced sustainability of values for this PDZ.
PDZ 12 Traeth Dyffryn to Pen y Chain	
<p>The whole zone is seen as having important and complex interlinking issues in regards to achieving a balance between intervention and No Active Intervention. Sites of HTL and MR include the following locations:</p> <p>PU 12.2 to 12.6 Artro Southern Spit to Llandanwg Headland; PU 12.8 (HTL, HTL, HTL) Harlech Valley; PU 12.9 (HTL, HTL, MR) Talsarnau; PU 12.13 (HTL, HTL, HTL) The Cob and Porthmadog; PU 12.14 13 (HTL, HTL, HTL) Borth-y-Gest;</p>	<p>Similar to PDZ 11, there is potential for the ecological designated habitats (<i>Natura 2000</i> sites, SSSIs) interest features such as sandflats and saltmarsh to be adversely restricted in their natural development through HTL and MR, which also applies to geological features and landscape values along this stretch of coastline. MR policies could result in the loss of BAP habitats, although this could result in the creation of additional habitat.</p> <p>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 impacts for the Tiroedd A Glannau Rhwing Cricieth Ac Afon Glaslyn SSSI.</p> <p>NAI and MR will affect some heritage sites through erosion including St Tanwg Church (Listed Buiding) (PU 12.5); Pont</p>

Long Term Policy Option/Plan	Assessment Summary
<p>PU 12.16 (MR, MR, MR) Morfa Bychan; PU 12.17 (HTL, MR, MR) Criccieth Shingle Banks; PU 12.18 (HTL, HTL, MR) Criccieth Harbour; PU 12.20 (HTL, HTL, HTL) Criccieth West; PU 12.24 (HTL, MR, MR) Afon Wen.</p>	<p>Briwet (Listed Building) (PU 12.10); and the Observatory Tower (Listed Building (PU 12.18). Loss of various railway lines may occur in response to the proposed management interventions such as MR along this PDZ, while NAI may cause loss to the footpath at Afon Dwryrd.</p> <p>The HTL and MR policies will overall provide long term protection of villages and some historic sites along this PDZ.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>The No Active Intervention scenario for the whole PDZ throws up some major issues with respect to maintaining the social and economic structure of the area. These issues arise in quite specific areas within the zone, while in other areas and more generally this scenario is other sensible and allows natural development of the important shoreline features. The With Present Management scenario really focuses in on those areas where there are the major management issues.</p>
PDZ 13 Pen y Chain to Trwyn Cilan	
<p>The whole zone is seen as having important and complex interlinking issues in regards to achieving a balance between intervention and No Active Intervention. Sites of HTL and MR include the following locations:</p> <p>PU 13.2 to 13.8 Abererch to Traeth Crugan; PU 13.11 to 13.13 The Warren to Penbennar.</p>	<p>There is potential for the ecological designated habitats (Natura 2000 sites, SSSIs) interest features such as sandflats to be adversely restricted in their natural development through HTL and MR, which also applies to landscape values along this stretch of coastline. MR policies could result in the loss of BAP habitats, although this could result in the creation of additional habitat.</p> <p>NAI and MR will affect some heritage sites through erosion (e.g Pared Mawr Camp (SM) at Porth Ceiriad (PU 13.18)), while the footpath at Treath Crugan would be lost as the new mouth for the Afon Penrhos is created in epochs 2 and 3 as a result of MR policies.</p> <p>The HTL and MR policies will overall provide long term protection of villages, infrastructure and some historic sites along this PDZ.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>The overall conclusions that may be drawn are that a policy scenario of NAI for the whole PDZ fails to address the substantial threat to the economic, social and heritage value of the area. While the NAI policy could deliver some significant ecological benefits, the policy on its own fails to deliver a balanced sustainability of values for this PDZ.</p>
PDZ 14 Trwyn Cilan to Carreg Ddu	
<p>The intent of the plan within the PDZ is to allow natural behaviour of the coast through NAI. Only in front of key settlements does the intent change to sustain communities through intervention of HTL. This will occur at the following location:</p> <p>PU 14.8 (HTL, MR, HTL) Aberdaron</p>	<p>With the exception of PU 14.8, the entire coastline within PDZ14 is currently undefended and the SMP policy in this PDZ provides for ten NAI policies for all three epochs along the majority of the coastline to provide for natural development (through erosion) of the sea cliffs, with HTL and MR identified as the preferred policies at one PU location (PU 14.8). No impact on Natura 2000 sites, SSSIs and BAP habitats is expected.</p> <p>NAI will affect the Listed Buildings and Historic Park to the</p>

Long Term Policy Option/Plan	Assessment Summary
Village and coastal slope.	west of Porth Neigwl (PU 14.5). The HTL policies will overall provide long term protection of Aberdaron, infrastructure and some historic sites along this PDZ.
Alternative policy option of NAI for whole PDZ.	The difference between the two baseline scenarios of NAI for the whole PDZ and an appropriate level of intervention is at Aberdaron. Here clearly the NAI scenario would fail to maintain this important village.
PDZ 15 Carreg Ddu to Trwyn Maen Dylan	
<p>The majority of the coast is unmanaged and the intent of the plan is to maintain the natural function of the shoreline through NAI supporting the important nature conservation and landscape.</p> <p>There are, however, small settlements that add to the character of the coast and associated with these communities are various access points to the shoreline, important for tourism and amenity. These will be protected through MR.</p>	<p>The SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites and SSSIs would occur. HTL and MR policies could result in the loss of BAP habitats, although MR policies could result in the creation of additional habitat.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk (e.g. 'White Hall' (Listed Building) (PU 15.2)). The HTL and MR policies will overall provide long term protection of villages, infrastructure and some historic sites along this PDZ.</p>
Alternative policy option of NAI for whole PDZ.	The overall conclusions that may be drawn are that a policy scenario of NAI for the whole PDZ fails to address the substantial threat to the economic, social and heritage value of the area. While the NAI policy could deliver some significant ecological benefits, the policy on its own fails to deliver a balanced sustainability of values for this PDZ.
PDZ 16 Trwyn Maen Dylan to Garizim and Pen y Parc to Trwyn Penmon	
<p>The whole zone is seen as having important and complex interlinking issues in regards to achieving a balance between intervention and No Active Intervention. Sites of HTL and MR include the following locations:</p> <p>PU 16.3 (HTL, MR, MR) Dinas Dinlle; PU 16.9 (HTL, HTL, HTL) Embankment and Village; PU 16.11 (HTL, HTL, MR) Ffordd Yr Aber to Afon Carrog; PU 16.14 (HTL, HTL, HTL) Y Felinheli; PU 16.21 (HTL, HTL, MR) Beaumaris West; PU 16.22 (HTL, HTL, MR) Beaumaris East; PU 16.24 (HTL, HTL, HTL) Llanfaes; PU 16.27 Garth Point and Dock</p>	<p>There is potential for the ecological designated habitats (<i>Natura 2000</i> sites, SSSIs) interest features such as sandflats and mudflats to be adversely restricted in their natural development through HTL and MR. MR policies could result in the loss of BAP habitats, although this could result in the creation of additional habitat.</p> <p>NAI and MR will affect some heritage sites through erosion (e.g. Tywyn y Parc Promontory Fort (SM) at Cwningar Bodowen (PU 16.1); historic gardens, castle and Listed Buildings at Beaumaris (PU 16.21)). 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. The Trout Farm and ponds at Pontllyfni (PU 16.1) may be impacted upon by increased erosion associated with NAI.</p>

Long Term Policy Option/Plan	Assessment Summary
<p>Yard; PU 16.28 (HTL, HTL, MR) Hiracl; PU 16.29 (HTL, HTL, HTL) Porth Penrhyn; PU 16.32 (MR, MR, HTL) Afon Aber; PU 16.33 (HTL, HTL, MR) Llanfairfechan.</p>	<p>The HTL and MR policies will overall provide long term protection of villages, infrastructure and some historic sites along this PDZ.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>No Active Intervention for the whole of this PDZ fails to build upon the important economic values of the area, fails to support tourism and access to the shoreline and fails to support any opportunity for adaptation to the increased pressures that arise from sea level rise.</p>
PDZ 17 Twyn y Parc to Twyn Cliperau	
<p>The whole zone is seen as having important and complex interlinking issues in regards to achieving a balance between intervention and No Active Intervention. Sites of HTL and MR include the following locations:</p> <p>PU 17.3 Aberffraw; PU 17.6 (HTL, HTL, MR) Rhosneigr; PU 17.7 (HTL, HTL, HTL) Crigyll valley South; PU 17.9 (MR, MR, MR) General policy for Southwest; PU 17.11 to 17.13 Porth Diana to Porth Dafarch; PU 17.15, 16, 18 Holyhead, Penrhos Bay, Stanley Embankment; PU 17.19 (MR, MR, MR) General policy for Inland Sea; PU 17.20 (HTL, HTL, HTL) Valley; and PUs for Newlands, Afon Alaw and Traeth Gribin to Twyn Cliperau.</p>	<p>The SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites would occur. 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.</p> <p>HTL and MR policies could result in the loss of BAP habitats, although MR policies could result in the creation of additional habitat.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk to erosion (e.g. Porth y Castell (Listed Building) at Porth Castell (PU 17.9)). The HTL and MR policies will overall provide long term protection of villages, infrastructure and some historic sites.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>No Active Intervention for the whole of this PDZ fails to build upon the important economic values of the area, fails to support tourism and access to the shoreline and fails to support any opportunity for adaptation to the increased pressures that arise from sea level rise.</p>
PDZ 18 Twyn Cliperau to Trwyn Cwmrwd	
<p>The whole zone is seen as having important and complex interlinking issues in regards to achieving a balance between intervention and No Active Intervention. Sites of HTL and MR include the following locations:</p> <p>PU 18.7 (HTL, HTL, HTL) Wylfa Power Station; PU 18.10 (HTL, HTL, HTL) Ffordd y Traeth;</p>	<p>Similar to PDZ 17, The SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites and SSSIs would occur. HTL and MR policies could result in the loss of BAP habitats, although MR policies could result in the creation of additional habitat.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk to erosion (e.g. Castell (SM) at Tre Fadog (PU 18.3)). The HTL and MR policies will overall provide long term</p>

Long Term Policy Option/Plan	Assessment Summary
<p>Cemaes Harbour; PU 18.11 (HTL, HTL, MR) Treath Mawr Promenade; PU 18.15 (HTL, HTL,MR) Porth – Llechog; PU 18.16 (MR, MR, MR) Trwyn Costog; PU 18.17 (HTL, HTL, HTL) Amlwch.</p>	<p>protection of villages, infrastructure (e.g. Wylfa Power Station) and some historic sites.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>No Active Intervention for the whole of this PDZ fails to build upon the important economic values of the area, fails to support tourism and access to the shoreline and fails to support any opportunity for adaptation to the increased pressures that arise from sea level rise.</p>
PDZ 19 Trwyn Cwmrwd to Trwyn Penmon	
<p>The whole zone is seen as having important and complex interlinking issues in regards to achieving a balance between intervention and No Active Intervention. Sites of HTL and MR include the following locations:</p> <p>PU 19.4 (MR, MR, MR) Porth Lydan; PU 19.5 Porth Moelfre; PU 19.10 Benllech Beach Road; PU 19.12 (HTL, HTL, MR) Porthllongdy; PU 19.14 (MR, MR, MR) Afon Nodwydd.</p>	<p>Similar to PDZ 18, The SMP policy in this PDZ provides a range of policies along the coastline including NAI, HTL and MR, although no impact on <i>Natura 2000</i> sites and SSSIs would occur. HTL and MR policies could result in the loss of BAP habitats, although MR policies could result in the creation of additional habitat.</p> <p>The long term NAI policy will deliver some ecological and geological benefits, although some historic features may be of risk to erosion (e.g. Anglesey Bridge (Listed Building) at Red Wharf Bay (PU 19.14)). The HTL and MR policies will overall provide long term protection of settlements (e.g. Porth Moelfre; Porthllongdy; Afon Nodwydd), infrastructure and some historic sites.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>The No Active Intervention scenario, applied over the whole coast, raises local issues in terms of managing risk to properties, and potentially life, but also in terms of the general built landscape and essential character of the various small communities, which underpin the overall amenity and tourism attraction along this PDZ. While the underlying aim is to maintain the spectacular and natural landscape of the area, the distinctive value of this part of Ynys Mon is the aspect that this natural landscape is punctuated by the traditional small communities, providing valuable areas for residential use and coastal use.</p>
PDZ 20 Gerizim to the Great Orme	
<p>The whole zone is seen as having important and complex interlinking issues in regards to achieving a balance between intervention (HTL and MR) and No Active Intervention. The only sites of NAI for this PDZ includes the following locations:</p> <p>PU 20.12 (NAI, NAI, NAI) Gogarth; PU 20.13 (NAI, NAI, NAI) Great Orme Head;</p>	<p>There is potential for the ecological designated habitats (<i>Natura 2000</i> sites, SSSIs) interest features such as sandflats to be adversely restricted in their natural development through HTL and MR. HTL and MR policies could result in the loss of BAP habitats, although MR policies could result in the creation of additional habitat.</p> <p>NAI and MR will affect some heritage sites through erosion (e.g. Gogarth Grange (SM) at Gogarth (PU 20.12). Disturbance could arise on the Historic Landscape Area due to MR policies for PUs 20.3, 20.6, 20.8, 20.9, and 20.11,</p>

Long Term Policy Option/Plan	Assessment Summary
<p>PU 20.14 (NAI, NAI, NAI) West to Tal-y-Cafn; PU 20.19 (HTL ,MR, NAI) Tal-y-Cafn to Llanrwst.</p>	<p>and the viewpoints at Conwy Castle. The HTL and MR policies will overall provide long term protection of villages, infrastructure and some historic sites (e.g. various Listed Buildings, Historic Park, Castle at Conwy (PU 20.6) along this PDZ.</p>
<p>Alternative policy option of NAI for whole PDZ.</p>	<p>The No Active Intervention scenario would fail to maintain the essential regional and national values along this PDZ. There would be extensive loss of property, there would be risk of sudden failure of defences, with risk to life, and there would be loss of the main transport routes. Although in some areas, over the very long term, it would result in a more naturally function coast and would, therefore, be of benefit to nature conservation, over the period considered by the SMP there would be such residual impact that nature conservation may well suffer loss.</p>

Section 4 – Integration of Environmental Considerations

The decision to provide a stand-alone SEA for the West of Wales SMP was taken after the commencement of the SMP process. Up to that point, SMPs had been accompanied by an SEA signposting exercise. This highlighted those elements of the SMP which addressed the requirements of the SEA Regulations. Accordingly, the use of the SEA in the development, refinement and selection of policy was limited in the context of the West of Wales SMP. Nevertheless, the SMP followed the Defra SMP Guidelines (Defra, 2006) which are intended to ensure that a consideration of environmental, social and economic factors is central to the development of policy options. A detailed account of how environmental issues have shaped the development of policy in the West of Wales SMP is provided in **Appendix A** of the SMP. Further to policy appraisal undertaken for the SMP, the primary aim of the SEA was to ensure policies for each part of the coast were assessed against environmental, social and economic criteria (see **Table 2.2**) and ensure that both beneficial and adverse effects of policies on the environment were recognised and that these informed the choice of policy. Adverse effects on the environment as a result of policy choice were subsequently mitigated.

The SEA process has developed two distinct documents: a Scoping Report; and an Environmental Report. These are described below. Conclusions of the HRA (updated November 2011, February 2012) which was undertaken in parallel with the SEA are provided in **Appendix G** and **Section 7** of this SoEP.

The Scoping Report (December 2009)

The Scoping Report established an environmental baseline for the coastline of the West of Wales and in doing so informed the development of a series of SEA assessment criteria by which SMP policies could be assessed. The suite of environmental concerns considered is as follows:

- Protection of vulnerable, low lying coastal communities and the socio-economic features and issues which support them in regard to the effects of sea level rise;
- Reduction in public open spaces due to coastal cliff retreat;
- The loss of designated intertidal habitat located seaward of existing defences due to sea level rise;
- Threat to biodiversity due to sea level rise and the interactions between various coastal habitat types;
- Maintenance of environmental conditions to support biodiversity and the quality of life;
- Loss of or damage to geological and geomorphological interest features on the coast due to unsympathetic cliff stabilisation and coastal/flood defence works;

- Interruption of sediment supplies by defence works leading to exacerbated erosion problems elsewhere;
- Potential threats to low lying historic and archaeological features located behind current defences.

The Environmental Report (November 2010)

Following the completion of the Scoping Report (and accompanying consultation period) the preferred policy options for the West of Wales SMP were assessed within the Environmental Report. On the basis of the assessment provided in the Environmental Report, the West of Wales SMP was considered to have been successful in providing a balance of considering the range of environmental values.

Out of approximately 5000 individual assessments of key interest features (see **Annex A-D** of **Appendix E** of the SMP), 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 supporting habitat);
- Cors Fochno and Dyfi Ramsar;
- Menai Strait and Conwy Bay SAC (loss of intertidal sandflat and mudflat);
- Lavan Sands, Conwy Bay SPA (loss of supporting habitat);
- Glannau Mon: Cors heli / Anglesey Coast: Saltmarsh SAC (loss of intertidal mudflat).

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 taken into consideration, along with preventative and mitigation measures for key nature conservation sites (as outlined in **Section 7**).

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 (as outlined in **Section 7**).

Table 4.1 to 4.20 provide summaries of the assessment tables detailed in Annex A-D of Environmental Report with the preferred long term policy plans associated with the third epoch (**50 -100 years**) for each unit highlighted in red text and shaded yellow. A criteria key is provided below.

The tables have also been updated to incorporate recent policy changes (for PU 11.12 from HTL, MR, MR to MR, MR, MR) and consultation comments (see **Section 6, Table 6.2**).

Criteria 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 Achievement of SEA Objectives for PDZ 1 - St Anns Headland to St Anns Head to Borough

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, recording and monitoring of erosion rates – See Section 7 . 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.
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.				

PDZ 1				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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 4.2 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	Habitat creation and monitoring – see Annex G-X in Appendix G and Section 7 .
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	
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Dark Blue	Dark Blue	Light Blue	
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Red	Red	Red	
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, recording and monitoring of erosion rates – See Section 7 .
To minimise the impact of policies on marine operations and activities.	Red	Red	Red	
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Green	Green	Green	The key features potentially affected are the car park and A487 at Newgale Sands, which may require relocation inland. At Broad Haven, Walton Hill provides alternative access between the villages.
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 of commercial business properties (PU 2.11).
	Light Blue	Orange	Orange	

PDZ 2				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				The key 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.
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 4.3 Achievement of SEA Objectives for PDZ 3 - Dinas Fach to Pen Anglas

PDZ 3				
SEA Objective	Impact of Preferred Policy for each Epoch			Mitigation
	1	2	3	
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 and monitoring – see Annex G-X in Appendix G and Section 7 .
To avoid adverse impacts on, conserve and where practical enhance the favourable conservation status of nationally designated nature conservation sites.	Orange	Orange	Orange	
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Red	Red	Red	
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Orange	Orange	Orange	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.
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.	Red	Red	Red	Excavation, recording and monitoring of erosion rates – See Section 7 . Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features (consideration of other designations required).
To minimise the impact of policies on marine operations and activities.	Light Blue	Orange	Orange	

PDZ 3				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Green	Green	Green	Present marine access in PU 3.11 at Abercastle would need to be adapted and reconfigured to maintain access.
	Light Blue	Orange	Orange	
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 associated with footpath, road and residential properties of Aberdraw (PU 3.1).
		Orange	Orange	
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).
		Red	Red	
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.	Light Blue	Light Blue	Light Blue	
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.	Light Blue	Light Blue	Light Blue	

Table 4.4 Achievement of SEA Objectives for PDZ 4 - Strumble Head 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 and monitoring – see Annex G-X in Appendix G and Section 7.
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.				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.
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, recording and monitoring of erosion rates – See Section 7. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features (consideration of other designations required).
To minimise the impact of policies on marine operations and activities.				

PDZ 4				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.				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.
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.				Mitigation such as relocation of the sailing club and monitoring of erosion and properties at Feidr Brenin (PU 4.15) may be required.
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.				Realignment of coastal path (PU 4.13).
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 4.5 Achievement of SEA Objectives for PDZ 5 - Pen y Bal to Pencribach

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7 . 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.
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.				

PDZ 5				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.				

PDZ 5				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
To minimise coastal flood and erosion risk to people and residential property.				Flooding of the properties on the waterfront (PU 5.12), although erosion protection will be maintained. Mitigation such as: a) early warning systems for flooding, and b) relocation of commercial properties.
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 4.6 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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7. 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.
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 of parts of the airbase and treatment plant (or local protection)

PDZ 6				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
				(PU 6.1).
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 4.7 Achievement of SEA Objectives for PDZ 7 - New Quay Head to Gilfach yr Halen

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7. 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.
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.				

PDZ 7				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
To minimise the risk of coastal erosion and inundation to agricultural land where it does not constrain biodiversity.	Green	Green	Green	
To minimise coastal flood and erosion risk to people and residential property.	Light Blue	Light Blue	Light Blue	
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	Light Blue	Light Blue	
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.	Light Blue	Light Blue	Light Blue	

Table 4.8 Achievement of SEA Objectives for PDZ 8 - Gilfach yr Halen to Carreg Ti-pw

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7. 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.
To minimise the impact of policies on marine operations and activities.				
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical				

PDZ 8				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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 4.9 Achievement of SEA Objectives for PDZ 9 - Carreg Ti-pw 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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7. 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.
To minimise the impact of policies on marine operations and activities.				

PDZ 9				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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 associated with properties of the caravan park at Clarach Bay (PU 9.11).
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 4.10 Achievement of SEA Objectives for PDZ 10 - Sarn Gynfelyn 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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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	
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Dark Green	Dark Green	Dark Green	
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	Light Green	Red	Excavation, recording and monitoring of erosion rates – See Section 7. 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.
To minimise the impact of policies on marine operations and activities.	Light Blue	Light Green	Light Blue	
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Light Blue	Orange	Orange	Alternative route configuration may be available to mitigate negative impacts to the coastal road at Borth (PU 10.1).

PDZ 10				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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.				Mitigation such as early warning systems for flooding and relocation of properties may be required for coastal properties of Borth (PU 10.2).
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 11 - Tonfanau to Traeth Dyffryn

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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.				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.
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, recording and monitoring of erosion rates – See Section 7. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features (consideration of other designations required).
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.				At Barmouth, alternative routes already exist and future redevelopment of the

PDZ 11				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
				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.
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.				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.
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.				It may be possible to mitigate impacts to the footpath at Ro Wen through realignment of the line inland.
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.12 Achievement of SEA Objectives for PDZ 12 - Traeth Dyffryn to Pen y Chain

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.	Red	Red	Red	Habitat creation and monitoring – see Annex G-X in Appendix G and Section 7 .
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	
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Red	Green	Red	
To support natural processes and maintain visibility and accessibility of geological exposures throughout nationally designated geological sites.	Light Blue	Orange	Light Blue	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.
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 Orange	Light Orange	Light 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	Orange	Orange	Appropriate design
To minimise coastal erosion and inundation risk to scheduled and other internationally and nationally important cultural heritage assets, sites and their setting.	Light Blue	Red	Red	Excavation, recording and monitoring of erosion rates – See Section 7. Localised management of shoreline retreat may also reduce the potential damage or loss of heritage features (consideration of other designations required).
To minimise the impact of policies on marine operations and activities.	Light Blue	Green	Orange	Monitoring and appropriate design
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Light Blue	Green	Red	The major negative impacts at Criccieth and Penychain to Criccieth

PDZ 12				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
				regarding railway line may be mitigated by realignment of the railway.
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 of footpath inland (at Afon Dwryd). 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.
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.13 Achievement of SEA Objectives for PDZ 13 - Pen y Chain 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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7. 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.
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.				

PDZ 13				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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 4.14 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, recording and monitoring of erosion rates – See Section 7. 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.
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.				

PDZ 14				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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 4.15 Achievement of SEA Objectives for PDZ 15 - Carreg Ddu to Trwyn Maen Dylan

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7. 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.
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.				

PDZ 15				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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 16 - Trwyn Maen Dylan to Garizim and Pen y Parc to Trwyn Penmon

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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	
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Green	Green	Green	
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.	Red	Red	Red	
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Light Green	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	Light Blue	Light Blue	Relocation of properties.
To minimise coastal flood and erosion risk to key community, recreational and amenity facilities.	Light Blue	Green	Green	
	Light Blue	Orange	Orange	Mitigation such as provision of alternative land for property development or relocation may be required (PU 16.33).

PDZ 16				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
To minimise coastal flood and erosion risk to industrial, commercial, economic and tourism assets and activities.				Relocation of trout farm (PU 16.1) and air field (PU 16.4).
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.17 Achievement of SEA Objectives for PDZ 17 – Twyn y Parc to Twyn Cliperau

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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.				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.				

PDZ 17				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
To reduce the risk of coastal erosion and inundation to ensure MoD assets remain operational.				

Table 4.18 Achievement of SEA Objectives for PDZ 18 – Twyn Cliperau to Trwyn Cwmrwd

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7. 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.
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.				

PDZ 18				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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 4.19 Achievement of SEA Objectives for PDZ 19 - Trwyr Cwmrwd to Trwyr Penmon

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 and monitoring – see Annex G-X in Appendix G and Section 7 .
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, recording and monitoring of erosion rates – See Section 7. 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.
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.				

PDZ 19				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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 4.20 Achievement of SEA Objectives for PDZ 20 - Gerizim to the Great Orme

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.	Red	Red	Red	Habitat creation and monitoring – see Annex G-X in Appendix G and Section 7 .
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	
To avoid adverse impacts on, conserve and where practical enhance national and local BAP habitats.	Green	Green	Green	
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 Orange	Light Orange	Light 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.	Orange	Orange	Orange	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.	Light Orange	Red	Red	Excavation, recording and monitoring of erosion rates – See Section 7. 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.
To minimise the impact of policies on marine operations and activities.	Light Blue	Light Blue	Light Blue	
To minimise coastal erosion and inundation risk to critical infrastructure and ensure critical services remain operational.	Light Blue	Light Blue	Light Blue	
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	Green	Green	

PDZ 20				
SEA Objective	Impact of Preferred Policy for each Epoch			
	1	2	3	Mitigation
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.				

Section 5 – Influence of the Environmental Report

The SEA through consideration of environmental factors and consultation (see **Appendix I**) has played a crucial role in the development of the SMP, as documented in **Appendix A** of the SMP. The consideration of environmental factors in the development of the SMP was based on adherence to SMP guidance, which has previously been considered sufficient to attend the requirements of the SEA Regulations. The environmental elements of the SMP process (such as the Theme Review and Policy Appraisal) had full regard to how the policy may affect the environment. This process informed the development of the SMP, supported by the environmental and social baseline data collected during the SEA process. This provided an indication of early constraints to the SMP policy selection, which was then informed by the strategic assessment of the effects of draft policy options, which provided an iterative process to the development of the SMP policies, which resulted in the Environmental Report, which identified the remaining impacts of the SMP policies.

The Environmental Report confirmed that the West of Wales SMP provides a wide range of positive environmental benefits, through the maintenance of key coastal settlements, defence of agricultural land, management of coastal habitat and protection of the coastal landscape, and indicates that impacts have been avoided or minimised where possible. The consideration of environmental issues can therefore be shown to have influenced SMP policy development and are further evidenced in the SMP Action Plan, which contains many of the recommended mitigation measures identified through the SEA process.

The SMP Action Plan (**Section 7** of the main SMP document) summarises all the specific actions that are needed to implement the plan and the policies. This includes actions by the Environment Agency and local authorities to develop flood and erosion risk management strategies and schemes. It also includes actions for the other partner authorities, for example to incorporate the plan into the land use planning system or support adaptation of affected people, businesses and organisations. The following key actions have been identified through the influence of the Environmental Report and Habitat Regulation Assessment Report:

- Continue / increase monitoring of intertidal sandflat, mudflat and saltmarsh areas within PDZs 2,3, 10, 11, 12, 13, 16 and 20 that may potentially be impacted upon by such policies as HTL or MR, which will involve significant loss of important or threatened habitats and species associated with SPAs, SACs, and Ramsar Sites.
- Up to 325ha of intertidal habitat will be lost by 2105 along the West of Wales coastline through such policies as HTL. This would occur 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. A study to reduce uncertainty with respect to the predictions of saltmarsh / mudflat development and to enable predictions of saltmarsh and mudflat loss / gain to be more accurate and has been made a high priority in the SMP Action Plan.

- Further investigations to identify potential sites to recreate compensatory BAP habitats (mudflats, sandflats and saltmarsh) and obstacles that may need to be overcome to ensure the successful implementation of this measure. This has been made a high priority in the SMP Action Plan.
- Continued discussions on the constraints of rail infrastructure on the optimal management of the coastline and its environment.
- Key specific actions to be implemented by the SMP Action Plan include the following:
 - Monitoring to be undertaken to ensure the detailed design and implementation of flood risk management structures (FRM) at Cei Bach (PU 7.5) and Newquay (PU 7.2) do not affect reefs;
 - Monitoring to be undertaken to ensure the detailed design and implementation of FRM structures particularly those in PUs 8.2, 8.4 and 8.6 around Aberaeron do not have a detrimental affect on the reef features of the Cardigan Bay SAC;
 - Monitoring of habitats predominately intertidal and sub-tidal reefs within PUs 2.2, 2.5, 2.8, 3.3, 3.4, 3.8, 10.18, 12.2, 12.6, 12.8, 12.18, 12.20, 12.24, 19.5, 19.10 and 19.12;
 - Commitment to carry out more detailed study and assessment combined with the production of a strategy to determine how any long term coastal process issues would affect the lagoon extent in PU 10.17;
 - Monitoring of sea caves in PUs 11.1 and 11.3.

Mitigation and monitoring required based on the conclusions of the Environmental Report and policy appraisal is discussed in **Section 7**. It should be noted that further assessment of environmental impacts and Habitat Regulation Assessment will be carried out at strategy and scheme level, and the monitoring and mitigation requirements will be reviewed as part of the development of Shoreline Management Plan 3 (SMP3).

Section 6 – Summary of Key Consultation and Responses/Actions

The Scoping Report underwent a five week consultation period with the West of Wales SMP Client Steering Group (CSG) starting in December 2009. **Table 6.1** outlines the key consultation responses at this stage and sets out how these have influenced the SEA assessment and SMP.

Following the consultation period and the provision of feedback by the statutory consultees on the Scoping Report, the environmental assessment of preferred SMP policy was undertaken using the SEA assessment criteria agreed through the consultation period.

The Environmental Report underwent a 3 month public consultation period, starting in November 2010, as part of the public consultation for the Draft SMP for the West of Wales. All consultation and stakeholder responses are described in the SMP (**Appendix B** of the SMP – Stakeholder Engagement: **Annex IV** – Consultation Responses), and these were considered both in relation to the SMP and any alterations to it and subsequent re-assessment in this SoEP. **Table 6.2** summarises the key consultation responses specific to the ER and sets out how these have influenced the SMP and any re-assessment within this SoEP due to changes to the SMP policies or clarifications. These are further detailed depending on the level of complexity of the responses in **Annex Ia** and **Annex Ib** of this SoEP and thus the reader is referred to these Annexes for more information.

Table 6.1 Key Consultation Responses and Actions for the Scoping Report

Organisation	Response	Action/Comment
Environment Agency		
	Good, transparent and well laid out methodology. 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.	Noted.
	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	Coastal paths of the West of Wales are of national significance 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

Organisation	Response	Action/Comment
	explanation is required or consideration as to how to get across these messages.	such policies as NAI or MR and thus major negative impact.
	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 <i>Natura 2000</i> sites and SSSI's in Wales. It's also questionable as to whether listed buildings should be factored in at strategy level.	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.
Countryside Council for Wales		
	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.	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.
	Given that this SEA relates to an SMP, CCW would expect the baseline data for transport infrastructure to relate primarily to the Plan area.	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.
	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.	Noted. The SEA objectives developed within the SEA processes of adjacent SMPs has been used for this SEA.

Table 6.2 Key Consultation Responses and Actions for the Environmental Report

Organisation	Response	Action/Comment
Countryside Council for Wales		
	There are many mistakes in this regarding location references and the annex needs to be thoroughly checked. As an example, many Pembrokeshire site names are given for PDZs in Gwynedd.	These concerns have subsequently been addressed in this SoEP for example Tables 4.1 to 4.20 .
	CCW finds that there are too many cases where specific details of mitigation are either vague or missing entirely. At this stage, there should be sufficient detail for the mitigation measures to be meaningful and the mitigation should be cross-referenced with the Action Plan.	Section 5 and Section 7 of this SoEP provides further details regarding mitigation measures associated with adversely effected sites. These measures have been cross-referenced with the SMP Action Plan.
	CCW would expect to see some reference to uncertainties and risks which may impact on the SEA process.	These concerns have subsequently been addressed in this SoEP (see Section 7).
	PU 3.2 and 3.3: This area is designated as an SSSI for geological and geomorphological interest. It is also part of the SAC. The implementation of HTL policies needs to be assessed in the context of these designations to ensure that issues are avoided. CCW seeks reassurance that this assessment has taken place.	PU: 3.3 - HTL could result in loss of intertidal communities / habitats. T hus major negative impact will occur. It is acknowledged that the policy may also cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate and this will be addressed through monitoring and the Action Plan. Table 4.3 of the SoEP reflects this assessment.
	PU 4.10,Pwllgwaelod Bay & Cwm Dewi SSSI: This area is designated as an SSSI for geological and geomorphological interest. The implementation of HTL then NAI/NAI policies needs to be assessed in the context of this designation to ensure that issues are avoided. CCW seeks reassurance that this assessment has taken place.	Local maintenance will occur for the first epoch prior to removal of defence and thus it is acknowledged that the policy may cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate and this will be addressed through monitoring and the Action Plan. However, the policy of NAI for the remainder of the epcohs will provide ongoing natural exposure for the geological and geomorphological interests. Table 4.4 of the SoEP reflects this assessment along with Section 7 .
	Further assessment of <i>Sabellaria</i> reef (BAP Habitat) against the selected policy management options for the West of Wales SMP.	These concerns have subsequently been addressed in Annex G-VI in Appendix G (the HRA).

Organisation	Response	Action/Comment
	<p>Further information should be provided for those designated sites specifically impacted upon by MR policies which may require compensation.</p>	<p>Annex G-X in Appendix G (the HRA) presents <i>Natura 2000</i> Sites and Habitat Compensation Tables based on MR policies.</p> <p>Annex IIA provides further information regarding SSSIs impacted upon by MR policies which may require compensation in particular freshwater and terrestrial habitats.</p> <p>Annex IIB provides a list of suitable sites for compensation or habitat creation for freshwater and terrestrial habitats.</p>
	<p>It is recommended that Geological Conservation Review (GCR) Sites and Regionally Important Geological Sites (RIGS) are listed in summary tables and shown on maps. Possible implications of these designations for preferred policy should be outlined, where possible, or it should be at least highlighted that this will need thorough investigation and adequate liaison with CCW before action plans can be formulated.</p>	<p>It should be noted that where GCR Sites have been identified as being SSSIs, these have been included in the SEA. However, further investigation and adequate liaison with CCW has been highlighted as an action to be undertaken to ensure sustainable delivery of the SMP in regards to further considerations of the RIGS and GCR Sites (see Section 7).</p> <p>Annex III provides a distribution of all the RIGS and GCR Sites for the West of Wales for further information.</p>

Section 7 – Environmental Monitoring Measures for the Implementation of this SMP2

The aim of the SMP is to provide a consistent approach to flood and coastal erosion risk management over the whole shoreline/frontage of the West of Wales. This consistency has to take account of the physical aspects of coastal management, ensuring that decisions in one area take account of the impact they have in other areas in terms of processes and geomorphology. Ultimately, however, this has to take account of the impact on the interrelationships between the socio-economic and ecological values identified for different areas of the coast as a whole; these being the real drivers behind any intent of management. Thus, monitoring will play an integral part in the successful implementation of the SMP and ensuring the key values of the West of Wales are well managed and safeguarded for future generations.

Monitoring for the SMP2 will primarily include:

- Continuation of the Strategic Regional Shoreline Monitoring Programme, which will also monitor the response of shoreline to establish whether the system will either accrete or erode in response to sea level rise;
- Monitoring and review of emergency response plans to prepare for extreme events that exceed standard; and
- Comprehensive monitoring programme for cliff top erosion (see **Figure 7.1**).

Figure 7.1 Cliff Monitoring of Wave Erosion and Landslide through GPS Surveys



The SMP Action Plan provides for both these actions. More detailed assessments will also be carried out at both the Coastal Strategy and scheme level – for instance realignment schemes will be supported by the environmental impact assessment process. These will include HRA and other assessments to determine and mitigate environmental impacts, which will be informed by the knowledge and information developed through the monitoring programme.

The environmental monitoring requirements of the Environmental Report are in part provided for by the SMP Action Plan.

Effects on the integrity of international sites

The potential effect on saltmarsh, intertidal sandflat and mudflat and supporting habitat extent of up to 535 ha, is predicted to occur in response to policies of the west of Wales SMP2. This is identified in **Appendix G** (the HRA) along with potential mitigation measures. However, an adverse effect on integrity on these sites may remain, and further test for alternative solutions, test for IROPI, and identification of compensatory habitat will be required by Welsh Assembly Government in order to enable the SMP to be adopted.

Since the assessment is of the plan, rather than a constituent policy, it is concluded therefore that the SMP will have an overall adverse effect on the integrity of International Sites. Potential mitigation may include the creation of equivalent habitat elsewhere, although a large amount would be offset by the MR policies as well as compensatory habitat requirements. **Annex G-X in Appendix G** (the HRA) presents specific policy units in which MR policies have the potential to create compensatory habitat. The MR policies provide the required landward development area to prevent or avoid impacts on SAC features, however, they do not indicate any greater extents that could be used as compensatory habitat. Examination of locations outside the SAC is therefore required, with initial examination within other coastal SACs in the study area.

Overall, the SMP Action Plan provides a specific programme of monitoring and evaluation to determine in detail the response of the system to SMP policy and to sea level rise. Actions are to be provided for each PDZ and epoch; however, the approach specified is as follows (i.e. this text is repeated for each PDZ):

- Action – A study to reduce the uncertainty with respect to the predictions of saltmarsh / mudflat development and to enable predictions of saltmarsh and mudflat loss / gain to be more accurate. This will be informed by monitoring.
- Action – Continue / increase monitoring of saltmarsh and mudflat areas. This needs to inform understanding of the intertidal areas' flood defence function, the sustainability of the earth embankments and its habitat function. To be integrated with the Strategic Regional Shoreline Monitoring Programme. This programme should also aim to collate any information relating to dredging (locations, timings, volumes, etc.) within ports and harbours.

The following proposed detailed preventative and mitigation measures have also been suggested for the West of Wales *Natura 2000* sites based on the Environmental Report and Habitat Regulation Assessment Report:

PDZs 2, 5, 6, 7, 8, 9, 10, 11, and 12 – HTL implementation at the scheme level will be designed to ensure no alteration to coastal processes outside the immediate vicinity of the existing defence line in order to ensure no indirect disturbance arises on biogenic (*Sabellaria alveolate*) reef habitat.

PDZ 2 (PUs 2.2, 2.4, and 2.5) – Once the existing defences begin to fail in Epoch 1, the scheme level development should consider an adaptive approach which uses softer defence measures such as shingle replenishment to ‘manage’ rather than halt erosion, and this would serve to maintain the intertidal interest feature.

PDZ 2 – There is scope for some realignment of existing defences where they begin to fail, and this should be explored during scheme level development, and thereby reduce the extent of coastal squeeze on intertidal interests.

PDZ 2 – Monitoring should be carried out in PUs 2.2, 2.5, and 2.8 to ensure that hydromorphology and dynamics are not being altered (such as increasing wave refraction/reflection) in such a way that they may begin to impact the intertidal and subtidal reef features.

PDZ 3 – Although HTL is stated for Whitesands Bay, the intention during scheme level development would be to provide an adaptive approach using softer defence options with the intention of minimising (and potentially) avoiding an adverse effect resulting from coastal squeeze.

PDZ 3 – There is scope for some realignment of existing defences where they begin to fail (even though HTL is stated policy), and this should be explored during scheme level development, and thereby reduce the extent of coastal squeeze on intertidal interests.

PDZ 3 - Monitoring should be carried out in PUs 3.3, 3.4, and 3.8 to ensure that hydromorphology and dynamics are not being altered (such as increasing wave refraction/reflection) in such a way that they may begin to impact the intertidal and subtidal reef features.

PDZ 10 – There is scope for some realignment of existing defences where they begin to fail (even though HTL is stated policy) and where there is possible room to realign inland, and this should be explored during scheme level development, thereby reducing the potential extent of coastal squeeze on intertidal interests.

PDZ 10 – During the MR policies in Epochs 2 and 3 for the dune system, scheme level development should ensure that support is given to the dune system.

PDZ 10 Borth Bog – Development of a management and maintenance strategy for the water levels associated with the bog, as well as methods and programme for changing the water level regime to enable the bog to respond in line with sea level rise prior to and during the MR policy introduction.

PDZ 10 – Monitoring should be carried out of the intertidal habitats and extents within the Dyfi Estuary in order to ensure that mitigation is achieving the intended quantities, and to help inform the timeliness of appropriate measures.

PDZ 10 – Monitoring should be carried out in PU 10.18 to ensure that hydromorphology and dynamics are not being altered (such as increasing wave refraction/reflection) in such a way that they may begin to impact the intertidal and subtidal reef features.

PDZ 10 – Scheme level development for the Dysynni Estuary should ensure that the lagoon remains protected, and that the water level regime is managed appropriately.

PDZ 11 - There is scope for some realignment of existing defences where they begin to fail (even though HTL is stated policy) and where there is possible room to realign inland, and this should be explored during scheme level development, thereby reducing the potential extent of coastal squeeze on intertidal interests.

PDZ 11 – During scheme level development, survey of the biogenic reef should be undertaken to ensure that any changes to extent and location have not occurred, and the reef should be taken into consideration when designing defences to avoid direct footprint disturbance during construction. Monitoring should also be carried out in PUs 11.1, 11.3, and 11.4 to ensure that hydromorphology and dynamics are not being altered (such as increasing wave refraction/reflection) in such a way that they may begin to impact the intertidal and subtidal reef features.

PDZ 11 - During any scheme level design in PUs 11.1 and 11.3, survey should be undertaken to ascertain the location of sea caves and where present in the frontage of a design, measures should be implemented to avoid obstruction or disturbance to the sea caves features.

PDZ 11 – Develop and implement a monitoring and management plan for Arthog bog to ensure that the feature is managed to improve resilience to sea level rise and related water level management issues if unforeseen (extreme) rises in water levels or drainage issues arise.

PDZ 11 – Monitoring should be carried out of the intertidal habitats and extents within the Mawdach Estuary in order to ensure that mitigation is achieving the intended quantities, and to help inform the timeliness of appropriate measures.

PDZ 11 – A strategy should be developed and monitoring undertaken to provide survey data for the sediment movement through the policy units to the south of Morfa Dyffryn (PUs 11.18 to 11.20) to identify what the sediment feed requirement currently is, and identify the rate by which MR should be undertaken to ensure that this is maintained naturally by translation of the shore in parallel with sea level rise. The strategy should be developed between the Local Planning Authority and CCW in order to ensure that MR develops landward an appropriate rate for the maintenance of the dune system.

PDZ 11 – The MR policy in PU 11.13 must be designed, at the scheme level, to avoid the loss of or construction disturbance to the woodland/heathland habitat features, and that it results in sensitive and natural flooding to any habitat rather than the presence or construction of structures.

PDZ 12 – There is scope for some realignment of existing defences (particularly PU 12.9) where they begin to fail (even though HTL is stated policy) and where there is possible room to realign inland, and this should be explored during scheme level development, thereby reducing the potential extent of coastal squeeze on intertidal interests.

PDZ 12 – A monitoring programme should be implemented (covering PUs 12.2, 12.5, 12.6, 12.16, 12.18, 12.20, 12.22, and 12.24) to ensure that sediment supply is being maintained and that the hydromorphology and dynamics are not being altered (such as increasing wave refraction/reflection) in such a way that they may begin to impact the intertidal and subtidal reef features.

PDZ 12 – Monitoring should be carried out of the intertidal habitats and extents within the Afon Glasylyn / Traeth Bach Estuary in order to ensure that mitigation is achieving the intended quantities, and to help inform the timeliness of appropriate measures.

PDZ 12 – The avoidance of disturbance or loss to the heathland or woodland habitat or species within the Meirionnydd Oakwoods and Bat Sites SAC should be implemented at the scheme development phase for PU 12.11. This mitigation should be successfully implemented.

PDZ 12 – During any scheme level design in PU 12.16, survey should be undertaken to ascertain the location of sea caves and where present in the frontage of a design, measures should be implemented to avoid obstruction or disturbance to the sea caves features.

PDZ 13 – A monitoring programme should be implemented in PUs 13.6, 13.7, and 13.8 to ensure sediment supply is being maintained and that the hydromorphology and dynamics are not being altered (such as increasing wave refraction/reflection) in such a way that they may begin to impact the intertidal and biogenic reef features.

PDZ 13 – Monitoring should be carried out of the intertidal habitats and extents within the PUs 13.6 to 13.8 in order to ensure that mitigation is achieving the intended quantities, and to help inform the timeliness of appropriate measures, as well as to confirm predicted changes and thereby allow for any preventative measures in response to unforeseen sea level rise.

PDZ 16 – There is scope for some realignment of existing defences where they begin to fail (even though HTL is stated policy) and where there is possible room to realign inland, and this should be explored during scheme level development, thereby reducing the potential extent of coastal squeeze on intertidal interests.

PDZ 16 (Morfa Dinlle, PUs 16.3, 16.4, and 16.5) – A strategy and management plan should be developed for the Morfa Dinlle dune system and surroundings, prior to development of MR policies, in order to ensure that proposals and actions appropriately enhance and allow the development of the dune habitats.

PDZ 16 – Monitoring should be undertaken to ensure that the extent of saltmarsh feature and distribution of saltmarsh types are not lost instead of the intertidal mudflat loss predicted.

PDZs 16 and 20 – Monitoring of the intertidal and subtidal sandbanks should be undertaken to ensure that overall extent of the subtidal sandbanks has not changed as a result of sea level rise.

PDZs 16 and 20 – Monitoring of the intertidal and subtidal reef habitats should be undertaken to ensure that no loss of extent or distribution occurs as a result of sea level rise.

Effects on Condition of Biological SSSIs and BAP Habitats

The SMP has the potential to affect the condition of SSSIs through changes in habitat and coastal management, with knock-on effects on the high level targets relating to SSSIs in favourable condition. The key SSSIs and habitats to be affected by the overall policies of the West of Wales SMP include:

- Dyfi SSSI – Intertidal mudflats, sandflats, saltmarsh; dunes; and swamp.
- Broadwater SSSI – Intertidal mudflats and saltmarsh; shingle spit; pools; reedbeds; ditches; and the river system.
- Aber Mawddach/Mawddach Estuary SSSI – Intertidal mudflats and saltmarsh; and reed beds.
- Morfa Dyffryn SSSI – Dunes; sea shore; and intertidal saltmarsh.

- Mynydd Tir Y Cwmwd A'r Glannau At Garreg Yr Imbill SSSI – Intertidal mudflats, sandflats, saltmarsh; and shingle beach.
- Newborough Warren – Ynys Llanddwyn SSSI – Intertidal mudflats, sandflats, saltmarsh; and dunes.
- Y Foryd SSSI – Intertidal mudflats and sandflats.
- Traeth Lafan SSSI – Intertidal mudflats and sandflats.
- Beddmanarch-Cymyran SSSI – Intertidal mudflats and sandflats.
- Traeth Lafan SSSI – Intertidal mudflats and sandflats.
- Aber Afon Conwy SSSI – Intertidal mudflats and sandflats.

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.

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.

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.

It is expected that many of the policy unit locations where MR is proposed will provide the key backdrop to the compensatory habitat requirements, and the link with the Regional Habitat Creation Plan along with the acceptance and commitment of the Local Authorities within the SMP study area to the provision of the stated compensatory habitat requirements. An initial examination of the potential compensatory habitat required based on total SSSI / BAP habitat and policy unit locations where MR is proposed is presented in **Annex IIA**. It should be noted as some of the BAP habitat associated with the SSSIs extends beyond the *Natura 2000* sites, the total compensation requirement thus may be greater

than those of the corresponding *Natura 2000* sites for the same policy unit locations where MR is proposed for the West of Wales SMP2 (total compensation values of which are provided in **Annex IIA**). As such larger areas of areas of freshwater / terrestrial compensatory habitat suitability may be required. However, given the large bank of potential areas available for compensatory habitat, at the strategic level there is no doubt as to the ability of compensatory habitats to be provided.

The identified quantities of compensatory habitat sites / locations / areas / types will need to be specifically measured and determined through strategy studies as well as site and scheme specific development / application. However, it is expected that compensatory habitat would also be implemented through the Environment Agency Wales' Regional Habitat Creation Programme which will be supported by the maritime local authorities involved in this SMP.

Investigation of Historic Environment and Geological Sites

Historical Sites

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 7.2** 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.

Table 7.2 Key Historical Sites that are at Risk of Erosion under NAI or MR Scenarios

PDZ Unit	Location	Type	Feature
1.1	Little Castle Point	SM	Hillfort
1.1	Great Castle Head		Hillfort
1.1	Gateholm Island		Monastery/enclosed settlement
1.1	Watery Bay		
1.1	Jack Sound		Deer Park promontory Fort
1.1	Tower Point		Tower Point Rath
1.1	Castle Head		Castle Head defended enclosure
1.1	Mill Haven		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

PDZ Unit	Location	Type	Feature
2.7	Broad Haven	SM	Hillfort, Black Point Rath
3.1	Dinas Fach		Dinas Fach Defended enclosure
3.1	Segar Rock		Porth y Rhaw camp
3.1	Pempleidian		Caerfai Camp
3.1	Castell Heinif		Castell Heinif promontory fort
3.1	Porthmelgan		Hut circles and Ancient Enclosures NW of Carn Ildi
3.1	St David's Head		St David's Head Camp
3.1	Castell Coch		Castell Coch Promontory fort
3.1	Caerau		Caerau Promontory Forts
3.1	Abermawr		Aberfelin Mill
3.1	Pen Castell Coch		Promontory Fort
3.1	Porth Mawr		Castell Coch Promontory Fort (on Penmorfa)
3.1	Carreg Golchfa		Defended Enclosure
3.1	Pwll Deri		Monument
3.1	Dinas Mawr		Dinas Mawr Camp
3.11	Ynys y Castell	Ynys y Castell hillfort	
3.12	Abermawr	Heritage Coast	Submerged forest
3.12	Abermawr	Listed Building	Submarine Listening Station
3.8	Whitesands Bay	Heritage Coast	Submerged forest
4.15	Newport, Parrog	Listed Buildings	Ty Mawr and Limekiln adjacent to Kilnhouse
4.3	Goodwick		Bridge Cottages
4.8	Lower town Fishguard		Old Fort
4.8	Castle Point	SM	Old Fort
5.1	Castell Tre-Riffith		Promontory Fort
5.1	Pen-Castell Promontory Fort		Promontory Fort
5.15	Mwnt		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		Castell Bach

PDZ Unit	Location	Type	Feature
6.6	Llangrannog	Boating / Shipyards	Shipyards
6.7	Cwmtidy	SM	Castall Bach
6.8	Cwmtidy	Listed Buildings	Former Lime Kiln
10.6	Dyfi Valley		Dwellings
10.6	Dyfi Valley		Military
10.6	Dyfi Valley	SM	Domen Las
11.4	Fairbourne		Anti Invasion defences
12.19	Criccieth		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		Lime Kiln
15.2	Porth Dinllaen		'White Hall'
16.1	Cwningar Bodowen	SM	Tywyn y Parc promontory fort
16.3	Dinas Dinlle		Scheduled Ancient Monument
16.6	Menai Straits	Listed Building	Yr Unicorn
16.13	Port Dinorwig	SM	Promontory Fort 'Dinas Camp'
16.15	Vaynol Park	Listed Buildings	Well preserved late 16th century walled and terraced garden including some listed structures
16.16	Llanfair Pwllgwyngyll		Statue, and coastal properties
16.26	Bangor		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		Feilin Carnau Tide Mill, Felin Wen tide mill and bodior tide mill
17.21	Valley C		Newlands Fish Weir
18.1	Porth y Felin	Historic Parks and Gardens	Cestyll historic park and Listed Buildings
18.3	Tre Fadog	SM	Castell

PDZ Unit	Location	Type	Feature
18.14	Porth Wen		Porth Wen brickworks
19.3	Lligwy Sands		Traeth Lligwy Fish Weir
19.7	Traeth Bychan	Listed Buildings	Lime Kilns
19.14	Red Wharf Bay		Bridge
19.15	Red Wharf Bay	SM	Llanddona Fish Weir
20.12	Gogarth		Gogarth Grange
20.19	Canovivm Roman Fort	SM / Listed Building	SM, Historic Park and Garden and Listed Building

Geological SSSIs

Geological SSSIs 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 (see **Annex III**). Geological SSSIs are legally protected like their biological counterparts, and some are incorporated within National Nature Reserves (NNR).

For geological SSSIs (or GCR Sites identified as being a SSSI) where potential reduced exposure may occur, documenting and recording should be undertaken for the following key designations:

- Arfordir Niwglw-Aber Bach / Newgale to Little Haven Coast SSSI;
- Traeth Llanon SSSI;
- Allt Wen A Traeth Tanybwllch SSSI;
- Glannau Tonfanau I Friog SSSI;
- Pwllgwaelod Bay & Cwm Dewi SSSI;
- St Davids Coast SSSI.

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). The distribution of RIGS within the study boundary is provided in **Annex III**. Further investigation and adequate liaison with CCW should be undertaken to ensure sufficient actions are implemented for the sustainable delivery of the SMP in regards to further considerations of the RIGS and GCR Sites.

Note: Further information on RIGS and GCR Sites is provided in the SEA Scoping Report for the West of Wales SMP2.

Risks

The specific SEA mitigation and monitoring measures to be implemented are closely linked with the HRA. The following are key risks relevant to the SEA based on the HRA in regards to achieving mitigation / compensation habitat for such features as *Natura 2000* sites for the West of Wales SMP:

- Lack of data of sufficient detail on the existing flora and fauna;
- Lack of clarity regarding the verification of interest features;
- Uncertainty regarding the success of the implementation of mitigation / compensation;
- Uncertainty regarding the timing of measures / actions to successfully compensate for habitat losses;
- Failure of compensatory habitat applications would prevent compensatory habitat being implemented;
- Risk of a lack of funding; and
- Where alternative approaches to shoreline management occur as a result of site specific decision making, there is a potential for unforeseen affects to arise. Consequently, any departures from the SMP policies should undertake an assessment in order to ensure no adverse effects on integrity arise, and also to ensure that their implementation does not prevent or inhibit the attainment of the mitigation measures and compensatory habitat requirements identified in this SMP.

References

EA (2009). *Strategic Environmental Assessment (SEA) – Internal Plans and Strategies*. Operation Instruction 246_04, Issued 20/01/2009. Environment Agency.

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.

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

Intentionally blank page.

Annex I – Consultation Responses/ Actions for the Environment Report

Intentionally blank page.

Res.Ref	Accept SMP	Section	Coastal Area	PDZ	Management Area	Policy Unit	Organisation	Correspondence	Issues Raised	Response			Comment	Action Suggest	Comment/ Action in finalising SMP	Action Plan
										Clarify	Info.	Policy				
Comments Received from CCW 10th October 2010: ER (SEE BELOW FOR RECENT COMMENTS ON SoEP - Dec 2011)																
A1.3a							CCW	Dr David Worrall (Regional Director West)	Non-technical summary			•	We very much welcome the efforts taken to simplify the non-technical summary, by explaining the large number of acronyms. We now find this summary to be a very user-friendly addition to the Plan.		Noted.	
A1.3b							CCW	Dr David Worrall (Regional Director West)	1.2.1 The SMP context for SEA			•	This document is incorrectly referred to as the draft Environment Report.		Noted.	
A1.3c							CCW	Dr David Worrall (Regional Director West)	1.4 Scope and structure of report			•	This should refer to chapter seven (not chapter Severn).		Noted.	
A1.3d							CCW	Dr David Worrall (Regional Director West)	1.5 Aims and objectives of the West of Wales SMP2			•	CCW welcomes consideration of our previous comment, regarding the need for properly referenced key information, figures and tables. We find this final Environment Report much clearer and easier to navigate as a result of this attention to detail.		Noted.	
A1.3e							CCW	Dr David Worrall (Regional Director West)	Table 1.3 SMP and SEA terminology			•	We cannot see where the SEA Receptor 'Climatic Factors' fits into the SMP issues and objectives.		Climatic factors are a driver for the SMP, not an SEA receptor and therefore are not included in Table 2.2. However, the climate change models undertaken for the development of the SMP have been taken into consideration in the detailed environmental assessments of the policy units in the SEA.	
A1.3f							CCW	Dr David Worrall (Regional Director West)	Table 2.2 Context and Methodology			•	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. While we accept that there can be data gaps with respect to BAP species, implementation of SMP2 policy must take these into account. As such, we urge the Plan-makers to ensure that all relevant species data has been sought. The network of Local Record Centres will be a vital source of information for this topic. We very much welcome the renaming of the SEA Receptor 'Earth Heritage, Soils and Geology' with 'Geology and Geomorphology'. However, this title has not been applied consistently throughout the document.		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.	
													For landscape character and visual amenity, the SEA objectives are "to conserve and enhance nationally designated landscapes". The target for this Receptor, however, is "no adverse impacts on landscape character". All intention to 'enhance' seems to have been lost in moving from 'objective' to 'target'. CCW strongly recommends that opportunities to restore or enhance landscape quality are taken (and recommended by the Plan) through the implementation of HTL. With respect to landscape, there is particular concern about those stretches of coastline subject to NAI policy which have a clause stipulating "does not preclude landowners doing their own defences". We have concerns that this option could result in significant environmental effect on landscape character and visual amenity. For the assessment of these sites, the potential for significant negative effects on landscape should be recorded.		Noted. For those potential stretches of coastline where local defences may be upgraded, actions to ensure the integrity of the landscape is maintained will be addressed in the Action Plan.	To be addressed in the Action Plan.
A1.3g							CCW	Dr David Worrall (Regional Director West)	4 SEA General comment			•	In some instances where HTL has been identified as the preferred policy option, 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, it should be noted that in situations where the policy changes from HTL to NAI (or MR) in subsequent epochs, any reduction in adverse effects, or anticipated positive impacts on features, is likely to depend on the removal or adaptation of any existing defences. We appreciate that the nature of any effects will depend on individual site specific conditions and the nature and location of any features present and, therefore, accept that they will need to be assessed at strategy or project level when sufficient detail is available.		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.	
A1.3h							CCW	Dr David Worrall (Regional Director West)	4.2.3 PDZ1 St Anns Headland			•	There is no reference to Skomer Marine Nature Reserve (MNR) for this PDZ. As such, CCW is concerned that impacts on the MNR have not been considered during the SEA process. We recommend a reassessment for this PDZ, taking account of the MNR and incorporating any resulting change into the relevant sections of the document.		Skokholm and Skomer SPA was addressed in detail (see Appendix E) in which no adverse effect is anticipated for the policies of NAI, NAI, NAI. As such for the MNR, it is also anticipated that no effects will occur as a result of intervention, with those if occurring based on natural processes.	

Res.Ref	Accept SMP	Section	Coastal Area	PDZ	Management Area	Policy Unit	Organisation	Correspondence	Issues Raised	Clarify	Info.	Policy	Comment	Action Suggest	Comment/ Action in finalising SMP	Action Plan
Comments Received from CCW 10th October 2010: ER (SEE BELOW FOR RECENT COMMENTS ON SoEP - Dec 2011)																
A1.3i							CCW	Dr David Worrall (Regional Director West)	4.2.122, 4.2.137, 4.2.162, 4.2.215 and 4.2.270 PDZs 10, 11, 12, 16 and 20				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. As raised in our accompanying Plan response, the Coastal Group needs to acknowledge that the implementation of certain SMP2 policies is dependent on the ability of Network Rail to relocate or adapt the line, and by the views of the Department for Transport and the Welsh Government regarding the future strategic management of this part of the rail network. We strongly recommend that the Coastal Group seeks reassurance from the Welsh Government/Network Rail that it will be possible to implement the Plan policies.		The SMP is the start of a long-term discussion that will require legislative change, however the constraints that rail infrastructure places on the optimal management of the coastline and its environment will be a priority of the Action Plan.	
A1.3j							CCW	Dr David Worrall (Regional Director West)	Table 4..25 Summary of PDZs existing mudflat, sandflat and saltmarsh BAP habitat areas in the study area and potential areas at risk by epoch				We welcome this reference to the amount and type of compensatory habitat required as a result of impacts to BAP habitats. The assumption seems to be made that this compensatory habitat will be available and/or feasible but there is no evidence of the existence of the land needed. CCW seeks reassurance that sufficient compensatory habitat is available.		As this is a strategic level assessment we cannot confirm the exact locations of compensatory habitat. There will be a requirement for this to be determined at implementation stage, this will be signed off by the authorities. Habitat creation will be tied into the National Habitat Creation Scheme.	
A1.3k							CCW	Dr David Worrall (Regional Director West)	4.5.4 Earth Heritage, Soils and Geology				This section should be renamed 'Geology and Geomorphology' in order to be consistent with the renamed SEA receptor. 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.		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. Glannau Tonfanau will be considered in more detail at implementation stage and included in mitigation and the Action plan.	
												This Report states that "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". The Geological Conservation Review (GCR) Report for this site indicates that the construction of sea walls and other stabilising structures has already led to the concealment of some of the exposures and further construction could lead to further concealment. The GCR recommends that rock bolting stabilisation techniques could be employed and would be less detrimental to the geological interest.				
A1.3l							CCW	Dr David Worrall (Regional Director West)	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.		Noted.	
A1.3m							CCW	Dr David Worrall (Regional Director West)	4.5.13 Conclusion				This section states that mitigation and management measures have been devised to address these effects where possible. CCW would like to see reference to what will happen where such measures are not possible.		The majority of sites will be mitigated, however for those few sites that may not be possible, then these will be noted in the Action Plan and continued monitoring undertaken to ensure no further impact on the integrity of sites. If so, further action will be undertaken at for site specific locations. However, it should be noted mitigation measures have been provided in Tables 4.3 to 4.22 for those sites which have major negative impacts.	To be addressed in the Action Plan.

Res.Ref	Accept SMP	Section	Coastal Area	PDZ	Management Area	Policy Unit	Organisation	Correspondence	Issues Raised	Clarify	Info.	Policy	Comment	Action Suggest	Comment/ Action in finalising SMP	Action Plan
Comments Received from CCW 10th October 2010: ER (SEE BELOW FOR RECENT COMMENTS ON SoEP - Dec 2011)																
A1.3n							CCW	Dr David Worrall (Regional Director West)	5. Monitoring and mitigation				CCW is keen to receive reassurance that there is comprehensive cross referencing of prevention/mitigation measures identified in the SEA, with those identified in the HRA and Action Plan. 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) has been suggested. This includes habitat creation. 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. For important geological and geomorphological features we recommend a programme of recovery and recording, identified in the Action Plan. CCW, along with other partners, should be involved in this work.		All sections of the report have been robustly cross checked before the report was finalised. All mitigation/ compensatory habitats to offset losses will be identified in the implementation stage. This will include consideration of the impacts of habitat creation. Geological and geomorphological features to be added to the Action Plan where the SMP is found to have a negative impact.	To be addressed in the Action Plan.
A1.3o							CCW	Dr David Worrall (Regional Director West)	Table 5.1 Summary of PDZs where Adverse Effect on Integrity of International Sites is Predicted				We welcome this reference to the amount and type of compensatory habitat required as a result of impacts to Natura 2000 sites. The assumption seems to be made that this compensatory habitat will be available and/or feasible but there is no evidence of the existence of the land needed. CCW seeks reassurance that sufficient compensatory habitat is available.		As this is a strategic level assessment we cannot confirm the exact locations of compensatory habitat. There will be a requirement for this to be determined at implementation stage, this will be signed off by the authorities. Habitat creation will be tied into the National Habitat Creation Scheme.	To be addressed in the Action Plan.
A1.3p							CCW	Dr David Worrall (Regional Director West)	8. Abbreviations and acronyms				We very much welcome this addition to the document.		Noted.	
A1.3q							CCW	Dr David Worrall (Regional Director West)	9. Glossary of terms				We very much welcome this addition to the document.		Noted.	
A1.3r							CCW	Dr David Worrall (Regional Director West)	Annex A – Assessment Tables for Material Assets and Built Heritage				There are many mistakes in this regarding location references and the annex needs to be thoroughly checked. As an example, many Pembrokeshire site names are given for PDZs in Gwynedd.		These concerns have subsequently been addressed in the SoEP.	
A1.3s							CCW	Dr David Worrall (Regional Director West)	Annex B – Assessment Tables for Natura 2000 Sites				CCW finds that there are too many cases where specific details of mitigation are either vague or missing entirely. At this stage, there should be sufficient detail for the mitigation measures to be meaningful and the mitigation should be cross-referenced with the Action Plan.		These concerns have subsequently been addressed in this SoEP (see Section 7) and the SMP Action Plan.	
A1.3t							CCW	Dr David Worrall (Regional Director West)	Annex C – Assessment Tables for Sites of Special Scientific Interest				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.		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.	
A1.3u							CCW	Dr David Worrall (Regional Director West)	Annex E - Scoping Report				CCW has made two previous responses to the SEA scoping report (March and September 2010).		Noted.	
A1.3v							CCW	Dr David Worrall (Regional Director West)	Annex F – Consultation Response and Actions/Response				We welcome this record of consultation responses and action taken to improve the SMP2 as a result.		Noted.	
A1.3w							CCW	Dr David Worrall (Regional Director West)	Other comments				CCW would expect to see some reference to uncertainties and risks which may impact on the SEA process.		These concerns have subsequently been addressed in the SoEP.	
A1.3x							CCW	Dr David Worrall (Regional Director West)	4.2.126: PDZ 10, Upper Borth to Tonfanau				The MR policy in PU 10.15 (Penilyn) could result in the loss of BAP habitats and species: Sand Dune, Coastal and Floodplain grazing marsh, breeding Lapwing Vanellus vanellus, Dactylorhiza purpurella subsp. cambrensis, Oenanthe fistulosa.		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.	

Res.Ref	Accept SMP	Section	Coastal Area	PDZ	Management Area	Policy Unit	Organisation	Correspondence	Issues Raised	Clarify	Info.	Policy	Comment	Action Suggest	Comment/ Action in finalising SMP	Action Plan
Comments Received from CCW 10th October 2010: ER (SEE BELOW FOR RECENT COMMENTS ON SoEP - Dec 2011)																
A1.3y							CCW	Dr David Worrall (Regional Director West)	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 estuary SAC feature of Arthog bog (BAP habitat Lowland Raised Bog). This should be made clear.		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.	
A1.3z							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 3.3, Solva				This area is designated as an SSSI for geological and geomorphological interest. It is also part of the SAC. The implementation of HTL policies needs to be assessed in the context of these designations to ensure that issues are avoided. CCW seeks reassurance that this assessment has taken place.		As noted in Annex C for PU: 3.3 - HTL could result in loss of intertidal communities / habitats. Thus major negative impact will occur. It is acknowledged that the policy may also cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate and this will be addressed through monitoring and the Action Plan. Noted in SoEP.	To be addressed in the Action Plan.
A1.3aa							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 3.5, Porth Clais				This area is a GCR site and we recommend that CCW is consulted in relation to the implementation of the HTL policy in		Noted.	
A1.3ab							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 4.10, Pwllgwaed Bay & Cwm Dewi SSSI				This area is designated as an SSSI for geological and geomorphological interest. The implementation of HTL then NAI/NAI policies needs to be assessed in the context of this designation to ensure that issues are avoided. CCW seeks reassurance that this assessment has taken place.		Local maintenance will occur for the first epoch prior to removal of defence and thus is acknowledged that the policy may also cause erosion rates associated with the geological interest feature of this SSSI to occur at a relatively slower rate and this will be addressed through monitoring and the Action Plan. However, the policy of NAI for the remainder of the epochs will provide ongoing natural exposure fore the geological and geomorphological interests. Noted in SoEP.	To be addressed in the Action Plan.
A1.3ac							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 5.9, Gwbert Road, Afon Teifi SSSI				Afon Teifi SSSI does not extend into this unit. The SSSI is Aberarth – Carreg Wylan.		Noted.	
A1.ad							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 5.10, Gwbert Cliffs, Afon Teifi				Incorrect reference cited: this should be Aberarth – Carreg Wylan SSSI.		Noted.	
A1.ae							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 5.15, Upstream of Bypass bridge north Aberarth – Carreg Wylan SSSI				Incorrect reference cited: this should be Afon Teifi SSSI.		Noted.	
A1.af							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 6.8, Cwmydydu				The reference in the first two epochs to Aberporth is incorrect. Aberporth is included in PU 6.2 (6.8 is Cwmydydu).		Noted.	
A1.ag							CCW	Dr David Worrall (Regional Director West)	Annex C: PDZs 5 and 6, Carreg Wylan SSSI				Current CCW research (contract no. R001459) into marine habitat creation, recovery and restoration should provide more information for this assessment in due course.		Noted.	
A1.ah							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 10.15, Penllyn				The assessment table should record a major negative impact on the SSSI because the MR policy could result in the loss of fixed dune grassland, marshy grassland and breeding Lapwing (all SSSI interest).		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.	
A1.ai							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 10.18, Glannau Tonfanau I Ffriog				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.		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.	
A1.aj							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 11.1-11.3, Glannau Tonfanau I Ffriog				A potential negative effect should be recorded here for Biodiversity, flora and fauna (impacts to <i>Sabellaria</i> reef are possible).		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.	
A1.ak							CCW	Dr David Worrall (Regional Director West)	Annex C: PU 11.2, Fegla				PU 11.2 is Liwyngwrl (not Fegla). Fegla is PU 11.9.		Noted.	

Res.Ref	Accept SMP	Section	Coastal Area	PDZ	Management Area	Policy Unit	Organisation	Correspondence	Issues Raised	Clarify	Info.	Policy	Comment	Action Suggest	Comment/ Action in finalising SMP	Action Plan
Comments Received from CCW 10th October 2010: ER (SEE BELOW FOR RECENT COMMENTS ON SoEP - Dec 2011)																
A1.al							CCW	Dr David Worrall (Regional Director West)	Annex 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.		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.	
A1.am							CCW	Dr David Worrall (Regional Director West)	Annex 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.		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.	
							CCW	Dr David Worrall (Regional Director West)	Annex 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.		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 of the SEA.	
							CCW	Dr David Worrall (Regional Director West)					Descriptions of the geology of the coastline and geomorphological processes are often rather limited or too generalised to be of any real value. Some descriptions are incorrect and statements about processes often seem to be broad assumptions with no reference to source data/publications. It is recommended that, especially for sections of coastline where NAI is not the preferred policy, these aspects are more thoroughly researched and presented to support the case that the preferred policy can be delivered sustainably. It is recommended that Geological Conservation Review (GCR) Sites and Regionally Important Geological Sites (RIGS) are listed in summary tables and shown on maps. Possible implications of these designations for preferred policy should be outlined, where possible, or it should be at least highlighted that this will need thorough investigation and adequate liaison with CCW before action plans can be formulated. Where NAI is expected to involve loss of geological features of SSSI or important components of those features (e.g. some unconsolidated Quaternary deposits and associated landforms) the implications should be stated for each relevant policy unit. It is also essential that the requirement for adequate funding for specialist scientific recording before and during any unavoidable erosion and/or other modification of geological/geomorphological features is highlighted, as has already been done for archaeological/heritage features that are		It should be noted that where GCR Sites have been identified as being SSSIs, these have been included in the SEA. However, further investigation and adequate liaison with CCW has been highlighted as an action to be undertaken to ensure sustainable delivery of the SMP in regards to further considerations of the RIGS and GCR Sites. Further information on RIGS and GCR Sites is provided in the SEA Scoping Report for West of Wales.	
Comments Received from CCW 16th December 2011: SoEP																
							CCW	Dr David Worrall (Regional Director West)	Section 1 - Introduction				It would be helpful if Figure 1.1 could include approval/adoption of the Plan as a stage in the Plan-making process and, in particular, where approval/adoption of the Plan sits in relation to the production of this Statement of Environmental Particulars.		Figure 1 of the SoEP has been updated to include where the approval/adoption of the SMP2 sits in relation to the production of this Statement of Environmental Particulars (SoEP). It should be noted the SoEP is an Environment Agency led process / procedure undertaken for all SEAs for internal plans and strategies. In addition, it should be made clear that the SoEP document is additional to the SEA ER, and is also intended only to provide information where the findings of the ER have changed as a result of SMP policy changes and/or as a result of request for clarifications or updates to findings where they have changed.	
							CCW	Dr David Worrall (Regional Director West)	Section 2 - Background				This SEA was undertaken following "the Environment Agency's internal procedure". A reference to further information about this procedure would be welcome. It would also be useful here to clarify who the Plan-maker/responsible authority for this SMP2 might be.		Clarity has been provided regarding EA's internal procedure in Figure 1 and further information can be found in the following document: Strategic Environmental Assessment (SEA) – Internal Plans and Strategies. Operation Instruction 246_04, Issued 20/01/2009. Environment Agency.	

Res.Ref	Accept SMP	Section	Coastal Area	PDZ	Management Area	Policy Unit	Organisation	Correspondence	Issues Raised	Clarify	Info.	Policy	Comment	Action Suggest	Comment/ Action in finalising SMP	Action Plan
Comments Received from CCW 10th October 2010: ER (SEE BELOW FOR RECENT COMMENTS ON SoEP - Dec 2011)																
							CCW	Dr David Worrall (Regional Director West)	Section 2 - Background				The brief background to the Plan area is welcome. However, while this background recognises Heritage Coast designations and cultural value, there is no reference to any natural environment designations. Similarly, while a list of SEA receptors is given, there is no explanation as to how these relate to SEA objectives and to the formation of an assessment framework.		The background for the SoEP has been updated to take into consideration the natural environment designations. A table has been provided in the SoEP which highlights the SEA assessment process regarding receptors, objectives and targets. Further information is provided in the SEA Scoping and Environmental Reports.	
							CCW	Dr David Worrall (Regional Director West)	Section 3 – Alternatives				Table 3.2 – It would be helpful to explain what a 'long term policy option' is and how this relates to the three epochs.		The long term policies are the overall vision/intent for a particular Policy Development Zone (PDZ) predominately based on the epoch 3.	
							CCW	Dr David Worrall (Regional Director West)	Section 3 – Alternatives				We would question how meaningful Table 3.2 is in its current format. As an example, the summaries do not include any detail about effects on SSSI's or BAP habitat. A further example is PDZ2 where a list of locations is given where either 'Hold the Line' or 'Managed Realignment' policies will be applied. There is no explanation as to which policy will apply at which location, a potential source of confusion for anyone reading this as a stand-alone document.		Explanation as to which policy will apply at which location is provided in Table 3.2 of the SoEP. Details regarding BAP habitats and SSSI features are provided in the table for those PDZ's which will be impacted upon by the SMP policy options.	
							CCW	Dr David Worrall (Regional Director West)	Section 3 – Alternatives				Table 3.2 – For PDZs 7, 8, 9, 15, 17, 18 and 19, Natura 2000 sites are incorrectly referred to as 'nature 2000' sites.		Table 3.2 has been corrected (i.e. Nature to <i>Natura 2000</i>).	
							CCW	Dr David Worrall (Regional Director West)	Section 3 – Alternatives				We welcome the attention given to both beneficial and adverse effects of policy choice in the assessment summaries.		Noted.	
							CCW	Dr David Worrall (Regional Director West)	Section 4 – Integration of environmental considerations				Reference to the accompanying HRA for the Plan would be welcome.		A detailed summary / conclusion of the HRA which can be found in Appendix G of the SMP has been noted in the SoEP, Section 4.	
							CCW	Dr David Worrall (Regional Director West)	Section 4 – Integration of environmental considerations				The statement that the 'approach was taken to select policy which has the most beneficial outcomes for the environment' is misleading. Policies for each part of the coast were assessed against environmental, social and economic criteria. The aim of Strategic Environmental Assessment in relation to proposed policies was to ensure that both beneficial and adverse effects of policies on the environment were recognised and that this informed the choice of policy. Adverse effects on the environment as a result of policy choice were subsequently mitigated for.		Noted and clarified in the SoEP, Section 4.	
							CCW	Dr David Worrall (Regional Director West)	Section 4 – Integration of environmental considerations				Tables 4.1 to 4.20 – mitigation detail in these Tables are sparse. For example, under PDZ1, a mitigation action of 'relocation' is given against the SEA objective for flood and erosion risk – relocation of what and to where is unclear. In other examples (eg. PDZ2), there are significant negative effects recorded but no mitigation noted.		Noted and further information provided for tables 4.1 to 4.20 regarding mitigation. In addition, detailed mitigation for environmental receptors of those sites which will be potentially by the West of Wales SMP2 is provided in Section 7 of the SoEP.	
							CCW	Dr David Worrall (Regional Director West)	Section 5 – Influence of the Environment Report				There seem to be conflicting statements here. On the one hand, there is a statement that the SMP2 was progressed in advance of the SEA. Conversely, a second statement is made that the SEA has informed development of the SMP2. It is important to emphasise the iteration and continuous process of consultation that has taken place.		Noted and clarified in the SoEP, Section 4.	
							CCW	Dr David Worrall (Regional Director West)	Section 5 – Influence of the Environment Report				No reference is made to the need for habitat creation within the Action Plan.		Action Plan to be updated.	To be addressed in the Action Plan.
							CCW	Dr David Worrall (Regional Director West)	Section 5 – Influence of the Environment Report				The fifth bullet point (key specific actions to be implemented) seems to imply an approach at odds with the precautionary principle, with a suggestion that monitoring will commence once negative effects have already been identified.		Noted and clarified in the SoEP, Section 5.	
							CCW	Dr David Worrall (Regional Director West)	Section 7 – Environmental Monitoring Measures				We welcome the section on the Plan effects on the integrity of international sites, though note that the figures given in table 7.1 and the figure for total loss are not consistent with the figures given in the final amended HRA. You should, therefore, consider removing this detail from the document and cross-referencing the HRA or ensure that the figures are consistent between the two documents.		Noted and Section 7 of SoEP regarding <i>Natura 2000</i> sites amended based on the updated HRA (November 2011, February 2012). Table 7.1 (of the previous SoEP) has been removed and summary provided with cross-referencing to the HRA.	

Res.Ref	Accept SMP	Section	Coastal Area	PDZ	Management Area	Policy Unit	Organisation	Correspondence	Issues Raised	Clarify	Info.	Policy	Comment	Action Suggest	Comment/ Action in finalising SMP	Action Plan
Comments Received from CCW 10th October 2010: ER (SEE BELOW FOR RECENT COMMENTS ON SoEP - Dec 2011)																
							CCW	Dr David Worrall (Regional Director West)	Section 7 – Environmental Monitoring Measures				We welcome the monitoring measures proposed and the useful and informative summaries of the detailed mitigation measures identified in the main HRA report.		Noted.	
							CCW	Dr David Worrall (Regional Director West)	Section 7 – Environmental Monitoring Measures				There is a significant likelihood that certain BAP habitats or species and SSSIs, particularly geological sites, would not be covered by such measures and may be actively and negatively impacted by these measures when implemented. This should be clearly acknowledged in the Action Plan, along with the potential need to address these separately at the more detailed project level, where appropriate.		Action Plan to be updated.	To be addressed in the Action Plan.
							CCW	Dr David Worrall (Regional Director West)	Section 7 – Environmental Monitoring Measures				We note the intention to use CCW's existing SSSI monitoring programme as monitoring for SMP2 effects on SSSIs. The emphasis should be on CCW to determine whether there are issues with SSSI condition and whether CCW thinks that the SMP2 policies may be having an impact. We suggest that the role for the Coastal Group is to maintain an overview and consider any amendments to the Plan if required. In addition, it would be appropriate for the Coastal Group to seek to secure physical coastal monitoring (either directly or through the Wales Coastal Monitoring Centre) that can inform any assessments of impact. This would help if, for example, there is a problem with condition of an SSSI feature by looking at wider sources of evidence to try and interpret the cause of that impact.		Noted.	
							CCW	Dr David Worrall (Regional Director West)	Annex Ia				We welcome this record of how CCW's consultation comments have been dealt with.		Noted.	
							CCW	Dr David Worrall (Regional Director West)	Annex III				We note that the areas given for habitat creation with respect to Natura 2000 sites do not tally with those found in Table 7.1 in the main document. Clarity is to sought as to the reason for this discrepancy.		Annex III (of the previous SoEP) presented specific policy units in which MR policies have the potential to create compensatory habitat, NOT those sites specifically impacted upon by SMP2 policies as presented in Table 7.1 (of the previous SoEP). Further details regarding <i>Natura 2000</i> Sites and Habitat Compensation Tables based on MR policies are provided in Annex G-X in Appendix G (the HRA).	

SMP Title		SMP No 21 - West of Wales: Cardigan Bay and Ynys Enlli to the Great Orme Coastal Groups					Lead Contact:	Emyr Williams	
Approval Required by Regional Director		Chris Mills					Lead Authority:	Pembrokeshire Council	
Website		tbc	Region:		Wales				
Item Number	Showstopper	Date Matter raised	Criteria Heading	Criteria sub heading	Document Reference	Comment	Action Required	Comment provided by:	Comment / Resposne in Finalising the SMP
28	Showstopper	11-Mar-11	Environmental	Engagement	ER Ch 4 and Scoping Report	<p>Has Cadw been approached for input at this strategic level? There appears to be potential for extensive impacts on heritage and archaeology but Cadw are not listed as consultees.</p> <p>"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". [4.5.8.] This is probably true but should not Cadw (or delegated authority), be involved at the same stage as CCW to give a perspective on relative significance of impacts at this strategic level?</p> <p>"Within the SMP Action Plan therefore, Cadw will..." [p.116] ... this is the first reference found to Cadw ... were they not involved in the decision-making process?</p>	Please clarify engagement with Cadw, that they have been involved in the impact assessment reported in the Environmental Report (ER), and ensure that they are fully signed up to this plan. This all needs to be made clear in the text.	Liz Galloway	CadW has provided input to the development of the West of Wales SMP2 at the strategic level through their involvement on the Steering Group.
29	Showstopper	11-Mar-11	Environmental	SEA/AA	1.7.4 and Annex F	I have searched in vain for feedback on consultation from the 'Final' Scoping Report "Key issues raised through the consultation process on this scoping report will be fed back into the SEA (as an iterative process). Key issues from this consultation exercise will be detailed in the Environmental Report." [Scoping Report 16.2.1/2] Annex F of the ER is blank. The ER talks only about future consultation (on the ER). A brief summary of the feedback would be helpful in the ER rather than having to refer to Appx F even for a basic understanding of interests gained through consultation.	Please add a paragraph to the ER to summarise the main issues raised in consultation. Has the ER been published and if so, for how long and is there any feedback? If already published, either a revised ER can be produced or an Addendum and this should be published for a period of between three and six weeks.	Liz Galloway	A brief summary of consultation feedback regarding the main issues raised concerning the ER can be provided in a Statement of Environmental Particulars (SoEP) if required. It should be noted that Appendix F of the ER issued for consultation as part of the final West of Wales SMP2 documents was not blank.
30	Showstopper	11-Mar-11	Environmental	SEA/AA	4.2.156 - 173	The options chosen for PDZ11 appear to carry significant risk and particularly to material assets. 4.2.7 sets out very clearly how effects can be avoided and successfully mitigated. However, other mitigation is vague or uncertain, e.g. "It may be possible to mitigate impacts to the footpath at Ro Wen through realignment of the line inland." [my underlining]. The reader needs to know whether these risks will be manageable and whether the Plan owns the measures to manage them.	Please make it clear in the text whether management of these risks is feasible. What are the implications of taking these options forward with significant impacts attached and what are the risks?	Liz Galloway	As the West of Wales SMP2 is strategic level document, detailed mitigation strategies and associated risks will be further investigated for particular sites including the specifics of realignment policies at the scheme level (i.e. site specific assessments).
31		11-Mar-11	Environmental	SEA/AA	All Coastal Areas/PDZs Overall objectives	The principle refers to 'maintain' or 'enhance' the high quality landscape, but the objective only refers to 'avoiding damage' and 'maintain'- where has the enhancement gone?	Recommend that the objectives are amended by CSG to reflect the need to enhance where possible.	Nicola Rimington	Discussed in comments to CCW.
32	Showstopper	11-Mar-11	Environmental	SEA/AA	Chapter 4 (throughout) and Annex D	Mitigation – the following statement occurs throughout chapter 4: "The Imperative Reasons for Overriding Public Interest (IROPI) case will need to be made for these policies and compensatory habitat created where appropriate". The purpose of the assessment is to inform the reader of the amount of compensatory habitat required in broad terms ... also the type and whether it is available or not. Concern was expressed by CCW about the lack of mitigation information when they reviewed the draft ER back in October 2010 but it still seems to be less than reassuring. Reference to mitigation in Annex D is vague and uninformative, often suggesting what "could" happen rather than what needs to be adopted as a commitment of the Plan. Annex B gives a little more information but there are too many cases where no mitigation is identified. Mitigation measures throughout the text and across receptors are very tentative, whereas the Strategic Environmental Assessment (SEA) should produce a mitigation requirement which the Plan owns. If the Plan cannot commit to all of the mitigation required, then this should also stated and in what measure, it falls short.	Please be specific about the compensatory habitat required: how much, what type and availability. Please also carry this through to the conclusions.	Liz Galloway	The amount and type of compensatory habitat to be identified in response to the outcomes of the West of Wales SMP2 will be detailed through the Wales Regional Habitat Creation Plan being developed by the Environment Agency Wales. However, general information regarding proposed compensatory habitat at the strategic level is currently provided in the updated HRA for the West of Wales SMP2. A summary of this can be provided in a Statement of Environmental Particulars (SoEP) if required.
33		11-Mar-11	Environmental	SEA/AA	Coastal Areas HRA summaries	<p>The Habitat Regulations Assessment (HRA) summaries do not always present the data on predicted habitat loss, presumably because the losses are not considered significant. This unfortunately just then makes this part of the document less transparent and means that further cross checking with the HRA is required.</p> <p>Furthermore, whilst assumptions are stated it is not clear here what sea level rise predictions have been used. Other sections of the plan talk about the potential impact of e.g. a 2m rise in sea-level over 100 years rather than 1m. This would also affect the predicted habitat losses, and therefore some consideration should be given to providing a range of values. It does not currently appear to present the worst case scenario despite the stated assumptions.</p> <p>Finally, where the predicted losses are presented, the figures are very specific (e.g. hectares given to 2 decimal places in some instances) which seems inappropriate given the uncertainty in the predictions.</p>	<p>Recommend that:</p> <ul style="list-style-type: none"> - predicted habitat losses are fully reported in the Coastal Area HRA summaries - consideration is given to providing a range of figures which represent the uncertainty associated with the predicted rates of sea level rise. - the predicted loss figures are provided in a manner which is appropriate to the confidence in their accuracy 	Nicola Rimington	Noted. In regards to consideration of a range of figures for sea level rise, this would be beyond the scope of a strategic level of assessment. The HRA for the West of Wales SMP2 has taken into consideration the worst case scenarios regarding sea level rises and predicted habitat loss.

Item Number	Showstopper	Date Matter raised	Criteria Heading	Criteria sub heading	Document Reference	Comment	Action Required	Comment provided by:	Comment / Response in Finalising the SMP
34		11-Mar-11	Environmental	SEA/AA	Coastal Areas HRA summaries	<p>These sections mention roll back of defences as a mitigation measure, but it is not clear whether this is the predicted loss that is left after instigation of MR policies (i.e a residual loss)?</p> <p>Furthermore, the predicted losses seem quite low and seem to be very restricted in terms of the features affected. For example, often the predicted loss is associated with Intertidal Sand and Mud (ISM) feature, but not for adjacent saltmarsh, or related to the estuary feature. Examples include, but are not restricted to the Mawdachh which reports only impacts on ISM but not Saltmarsh or estuary, and also Anglesey saltmarsh Special Area of Conservation (SAC) focuses on is very much ISM loss rather than saltmarsh. I recommend that this is checked again with reference to potential impacts on all features.</p> <p>Finally, to note that any habitat creation through managed realignment which is outside the existing boundary of the designated sites would be compensation rather than mitigation.</p>	<p>Please clarify whether the figures for predicted losses represent total loss or residual loss following implementation of mitigation measures.</p> <p>Also check and clarify whether the full range of features that could be affected either directly or indirectly (e.g. due to wider morphological change) have been included in the HRA. Further explanation of the rationale should be provided if the CSG is happy that full consideration has been made.</p>	Nicola Rimington	In regards to figures for predicted losses, they are all total loss prior to any mitigation measures!
35		11-Mar-11	Environmental	SEA/AA	Coastal D, Afon Wen, Policy Unit 12.24	<p>There are sensitive intertidal habitats in this location (<i>Sabellaria</i> reef) which is already under threat due to the ongoing erosion. As we currently have no practical experience of recreating this habitat it is important that we take appropriate measures to manage it in situ. In this instance the policy is HTL and then MR/MR. This is probably OK, but does add weight to the need to relocate the railway line and pursue the MR policy in the medium and longer term. (See other comment on railway issues).</p>	<p>Recommend that the need to pursue the MR policy in the medium and longer term is strengthened with reference to the need to sustain this sensitive habitat.</p>	Nicola Rimington	Noted. Further consideration will also be given for detailed mitigation strategies for particular sites including the specifics of realignment policies at the scheme level (i.e. site specific assessments).
36		11-Mar-11	Environmental	SEA/AA	Env. Report 3.3.7. page 34.	<p>Chapter 3 provides a very well illustrated and straightforward description of risks within the study area until 3.3.7. Community Assets. Graphic illustration of the problem areas would have been useful here to give a perspective on how extensive these risk zones are.</p>	<p>Please consider adding a plan to give context and scale to the text.</p>	Liz Galloway	Noted, although current and future risks associated with community and assets is predominately a generic description with only key examples provided with more graphical illustrations such as cliff erosion (retreat) and risk to community assets provided throughout the final West of Wales SMP2 documents.
37		11-Mar-11	Environmental	SEA/AA	Env. Report 1.8.1	<p>Definitions - "The SEA will form a component of the wider assessment mechanisms for the SMP which also includes:" Is this an accurate statement in view of the fact that SEA encompasses and reports impacts on all aspects of the environment, including HRA and WFD? Also, what is meant by "a simple SEA based assessment" in 1.9.4?</p>	<p>Please reconsider text relating to SEA.</p>	Liz Galloway	Noted, although the text is highlighting the strategic level (wider assessment) in which the SEA will be undertaken for the West of Wales SMP2, however the level of assessment regarding the alternatives (i.e. the various shoreline management policies and epochs) is relatively detailed in comparison to an SEA which does not take into consideration multiple scenarios.
38	Showstopper	11-Mar-11	Environmental	SEA/AA	Env. Report 4.5.2, page 110 (and Table 4.24).	<p>Compensatory Habitat – 4.5 only presents conclusions to the assessment of impacts and stops at this point. An ER is required to specify the amount and type of compensatory habitat or avoidance measures which are required. An assumption is made in 4.5 that this habitat/these measures will be available/feasible but evidence of the existence of suitable habitat or land is needed. The significance of this potential impact is high and more reassurance needs to be given to show that compensation is a viable proposition. Does the available compensatory habitat and that created through MR add up to the requirement due to negative impacts?</p>	<p>Please explain how and where and in what quantity sufficient habitat will be found to satisfy Habitats Directive (HD) requirements. If there is uncertainty in terms of gain by MR, then please give best and worst case scenarios.</p>	Liz Galloway	The amount and type of compensatory habitat to be identified in response to the outcomes of the West of Wales SMP2 will be detailed through the Wales Regional Habitat Creation Plan being developed by the Environment Agency Wales. However, general information regarding proposed compensatory habitat at the strategic level is currently provided in the updated HRA for the West of Wales SMP2. A summary of this can be provided in a Statement of Environmental Particulars (SoEP) if required.
39		11-Mar-11	Environmental	SEA/AA	Env. Report 4.5.2, page 110.	<p>IROPI procedure – the next stage of establishing 'no alternative' before presenting an IROPI case is reported in 4.5.2 as a straightforward progression. 7.2.1 of Appendix I (HRA report) suggests that alternatives do exist but are too costly or technically difficult to be acceptable. My understanding is that to prove a case for 'no alternative' there must be no alternatives of any kind before the IROPI case can be made, otherwise the case is likely to be rejected. Is this correct because if so, there is surely considerable risk attached to achieving approval to create such extensive negative impacts on HD sites?</p>	<p>Please consider the two texts and present them in such a way that: a) the HRA Report in the ER makes it clear that there are no alternatives (if this is the case to be made), b) the risks of the case being made are presented in the ER. At present the process is stated, but any risks/implications are not.</p>	Liz Galloway	The updated HRA provides further information regarding the IROPI procedure. In regards to risks of cases presented in the ER, these do not have to be provided in detail as this is part of the IROPI procedure.
40		11-Mar-11	Environmental	SEA/AA	Env. Report Ch. 4	<p>Alternative Options – Chapter 4 is a readable and informative chapter - potential impacts are reported under each Policy Development Zone (PDZ) but the availability of alternatives is not clear - some information on why alternatives were not chosen is needed in the ER to explain SMP policy decisions.</p>	<p>Please indicate why alternative policy options were not chosen and explain how the environment was taken into account in the decision-making.</p>	Liz Galloway	The environment was taken into consideration throughout the development of the West of Wales SMP2 for example, through consultation between the environment and engineering team; option appraisal workshops and Steering Group meetings. Appendix A of the West of Wales SMP2 provides further details in the development of the SMP including the way in which the environment was taken into consideration and determination of the policy options.
41		11-Mar-11	Environmental	SEA/AA	Main Report: Section 2 Environmental Assessment	<p>Definition of "environmental assessment" - a number of appraisal and assessment terms are used in Section 2 and its not clear what the difference is between 'environmental assessment' and 'environmental appraisal' and their meaning in relation to the natural environment and the environment as defined for SEA.</p> <p>2.1.1 implies that Environmental Assessment, as used in the heading to 2.1, is defined in 2.1.1. whereas it is only describing the natural environment and not the fuller scope of environmental assessment at either strategic or detailed level. What does 'environmental appraisal' mean in para 3 of 2 Environmental Assessment and in the heading and para 2 of 2.1.2. below? Early references to SEA and Appropriate Assessment (AA) appendices would be useful.</p>	<p>Review 2.1 to define 2.1.1. more accurately as 'natural environment' and distinguish between the natural environment and environment as used in SEA. Please clarify the use of the terms appraisal and assessment. Please insert a reference to the SEA Appendix. It would be helpful if references to both SEA and AA Appendices were provided near the beginning of the relevant sections.</p>	Liz Galloway	In regards to the definition between environmental assessment and environmental appraisal, there is no actual difference and both terms are interchangeable and thus there meaning in relation to the natural environment and the environment as defined for SEA is the same. Although not directly stated, other aspects of the fuller scope associated with the environmental assessment (the term environment as used in the SEA) are referenced in Section 2.1.1 of the main report in regards to the Thematic Review presented in Appendix E of the main report. These studies identified the key features of the natural and human built environment of the coastline, including a commentary on the characteristics, status, relevant designations, as well as the importance of these features and the "benefits" they provide to wider society.

Item Number	Showstopper	Date Matter raised	Criteria Heading	Criteria sub heading	Document Reference	Comment	Action Required	Comment provided by:	Comment / Resposne in Finalising the SMP
42	Showstopper	11-Mar-11	Environmental	SEA/JAA	Non Technical Summary (NTS) page 5, last para	"mitigation and management measures have been devised to address these effects where possible." What will happen where this is not possible? Is there a risk here of IROPI process and failure to satisfy requirements to compensate? This is rather more worrying than reassuring as a concluding statement to Non-Technical Summary (NTS).	Please explain the implications of this statement and either quantify the risk in the NTS or else consider revising the statement.	Liz Galloway	The successful implementation of relevant mitigation measures are overall at risk from several factors for example, lack of data of sufficient detail on existing flora and fauna; lack of clarity regarding the verification of interest features; uncertainty regarding the timing of measures/actions to successfully compensate; or lack of funding. Thus, further measures for those sites where mitigation measures have not been devised at the strategic level for the West of Wales SMP2 will require further detail regarding such risks to address any effects of the SMP. Section 5.1.2 of the ER provides further measures which are required to support the SMP to avoid an adverse effect on the environmental values of West of Wales shoreline.
43		11-Mar-11	Environmental	SEA/JAA	Section 5.1 and Appendix E p5	The SMP2 will result in loss of habitat. Are there any proposals for provision of compensatory habitat within the SMP2 and has this informed development of draft SMP2 policies with a view to provided in a balance between potential habitat losses and gains over the SMP2 period.	Provide additional information on proposed compensatory intertidal habitats which could be developed in line with the proposed SMP2 policies.	Marcus Phillips	Additional information regarding proposed compensatory habitat at the strategic level is provided in the updated HRA for the West of Wales SMP2. The information provided in the updated HRA will further feed into the Wales Regional Habitat Creation Plan being developed by the Environment Agency Wales.

Item Number	Date Matter raised	Document Reference (click arrow to select from list)	Table/Appendix and/or Sub Para number	Matters Identified by Members	Action Required	Comment provided by:	Response from CSG	Section Amended (New para nos and Table nos used in this column)	SMP Review	Action Required	Comment provided by:	Date comment provided
1	11-Mar-11	Main Report	Sect 1.1 SMP map	This national SMP map is very out of date.	At this stage I suggest you remove this map. If EA are able to provide a version which they are content to have published they will advise.	Steve Jenkinson						
2	11-Mar-11	Main Report	Sect 1.1 p 1.2	Both Defra's MSfW and WAG's New Approaches Programme are referenced, but almost as discrete entities. This may also be a good place to confirm (this is my understanding) that WAG are content for Welsh SMPs to follow Defra 2006 guidance, noting their own supplementary guidance. Should we be referencing Defra PAG here – will the reader understand what this is and its relevance?	Suggest that the CSG re-words existing text to explain that Defra and WAG are promoting similar strategies. Also consider adding reference to SMP guidance and amending ref. to PAG.	Steve Jenkinson						
3	11-Mar-11	Main Report	Fig. 1.2	I like the map but St Ann's Head and Great Orme not shown. [SJ] Figure 1.2 does not correctly show the boundary of the SMP2 at St Ann's Head and Great Ormes Head refer to Figure 3.5 and App E, Figure 1.3 (p7) which do show the boundary correctly. There are a number of other versions of this figure throughout the document. [MP]	Would be helpful to add these as they are the boundary points. [SJ] Provide a consistent map which shows the SMP2 boundaries correctly in all SMP2 documents. [MP]	Steve Jenkinson Marcus Phillips						
4	11-Mar-11	Main Report	Section 1.1.1 1st para.	Last sentence regarding what happens following adoption is misleading.	I suggest this is reworded to explain that strategy studies are one of a number of implementation activities.	Steve Jenkinson						
5	11-Mar-11	Main Report	Section 1.1.1 3rd para. & poss. elsewhere	Current preference is not to use "SMP2" term, simply "SMP".	Amend text.	Steve Jenkinson						
6	11-Mar-11	Main Report	Sect 1.1.3	Some long chunks of text.	Some para. breaks would help readers.	Steve Jenkinson						
7	11-Mar-11	Main Report	Sect 2.1.1	Table 1.1 is a very useful summary, but it prompted a couple of further questions. What is meant by West of Wales in this context – does this include any designated area that is on or includes the coast? Also, presumably some of these areas overlap?	I suggest a couple of notes to clarify or references to mapping elsewhere to help explain.	Steve Jenkinson						
8	11-Mar-11	Main Report	Sect 3.2	Para. 4 references the NCERM system, noting that it has been updated, but I am not sure what readers will know of NCERM at this stage.	Could the CSG clarify the position with regard to NCERM for this stretch of coast and consider whether discussion about an update needs further clarification?	Steve Jenkinson						
9	11-Mar-11	Main Report	Section 4.3.3	Section 3.5 introduces PDZs as high level divisions of the coast, and within these nest Management Areas and Policy Units. Section 4 presents Coastal Areas. There is some risk of confusion here. [SJ] The text structure in the Coastal Sections is based on PDZ's not PU's where the policy management option is determined. This makes it difficult to relate the relevant text to the PU and its Policy Option. This structure then changes in PDZ6 where it is structured to match the PU. There is a lack of consistency here as well. [DH]	The CSG should consider taking out the "Coastal Area" label and simply discuss each area by name eg. West Pembrokeshire, Cardigan and so forth. [SJ] Reconsider text structure for final version so links between text and PU's are clear at PU level. [DH]	Steve Jenkinson David Harris						
10	###	Appendix C Annex 1	Figures	Some of these figures could do with enlarging eg. Figure 1 warrants a page to itself in my view to aid readability.	Consider enlarging figures.	Steve Jenkinson						
11	11-Mar-11	Appendix C Annex 4	Maps	The NAI and WPM maps present erosion lines, flood risk areas, conservation areas and scheduled monuments. I do not recall seeing any maps showing agricultural land classification areas or critical infrastructure?	Has any consideration been given to including mapping showing agricultural areas, critical infrastructure – these would be useful enhancements?	Steve Jenkinson						
12	###	Appendix C Annex 1	Figure 2	Refers to "current observations" in the key.	It would be helpful to clarify that this is UKCP09 H++.	Steve Jenkinson						
13	###	Appendix F	Footer	Footer reads "Appendix H".	Amend.	Steve Jenkinson						
14	11-Mar-11	Main Report	Section 2	This section summarises the SEA and HRA, but I did not see anything covering the WFD assessment. Also, with respect to the HRA, it would be helpful to summarise the conclusion of the Appropriate Assessment and any follow on actions.	When the final report is prepared I suggest that a section on WFD is added, and that the key outcomes from all of the assessments are summarised in this section of the report.	Steve Jenkinson						

Item Number	Date Matter raised	Document Reference (click arrow to select from list)	Table/Appendix and/or Sub Para number	Matters Identified by Members	Action Required	Comment provided by:	Response from CSG	Section Amended (New para nos and Table nos used in this column)	SMP Review	Action Required	Comment provided by:	Date comment provided
15	11-Mar-11	SEA Report	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.	Plural? Need to correct.	Liz Galloway	Comment Please					
16	11-Mar-11	SEA Report	4.5.8.	These include many schedule s(d) monuments	Typo – need to correct.	Liz Galloway	Comment Please					
17	11-Mar-11	Main Report	Coastal D, page 4D.92	The flood risk maps shown do not cover all of the area being described. Given the risks described this would have been helpful.	Recommend that additional flood risk maps are inserted to cover all areas at increased future risk.	Nicola Rimington						
18	11-Mar-11	Appendix C Annex 4	NAI Maps	The NAI erosion maps in Annex 4 have a 2m erosion line in addition to the 20/50/100 scenarios. It's unclear what the purpose of this is? Also it doesn't help clarify the maps given the scale of these and now having 4 lines.	Can the CSG please clarify? And does the team consider the scale of maps are satisfactory and will allow correct interpretation by other stakeholders, especially as the WPM map looks very similar?	Jim Hutchison						
19	###	Appendix F	Annex 1	The last column reads "MDFS".	Presumably this should be "MDSF"; if so please correct.	Jim Hutchison						
20	11-Mar-11	Various locations, particularly at the start of new sections	General	Photos have been used in a number of places throughout the document and it would be useful if a caption could be provided to confirm the location for all photos (in particular where photos are included at the start of new sections of the document). [MP] Photographs between sections are good but should be annotated with location - think readers generally like to know the photograph location. [Aph]	Provide captions for all photos. [MP] Suggest annotate photographs with location. [Aph]	Marcus Phillips Adrian Philpott						
21	11-Mar-11	Main Report	Section 5	Unfortunate use of the vague headings such as 'erodable frontages' and 'coastal sediment features'	Suggest using more appropriate technical headings.	Marcus Phillips						
22	11-Mar-11	Main Report	Section 5	The following statement 'The SMP delivers a plan for the management of risk from tidal flooding and erosion, setting policy solely for coastal defence' should be updated to refer to coastal erosion and flood risk management not defence. Also poorly worded second paragraph.	Update text.	Marcus Phillips						
23	###	Main Report	Section 5	Typo in title for Box 5.1 p5.7.	Amend.	Marcus Phillips						
24	11-Mar-11	Main Report	Economics summary tables p4A.104 and Table 6.4 onwards	In a number of locations the timescale for the three epochs is quoted as 'now through to 2025', '2025 to 2055' and '2055 to 2105'. Surely these should read '2011 to 2031', '2031 to 2061' and '2061 to 2111'. HRA refers to Epoch 1, 2 and 3 (p 4A.70).	Update text which needs to be consistent throughout the SMP2 document.	Marcus Phillips						
25	11-Mar-11	All	Document Approval Page (prior to contents page)	The "Checked by" and "Approved by" sections are blank. Also, the client for the SMP is stated as Pembrokeshire County Council, as opposed to the Coastal Group?	Please clarify the status of these documents. Also please clarify the client.	Marcus Phillips						
26	11-Mar-11	Various	Various	The spelling of St Ann's Head varies throughout the documents (and figures) between 'St Ann's Head' and 'St Annes' Head' for example on the flow chart, Section 4 Introduction, p4A.1, p4A.8, Section 5 p 5.2, p6.1, p6.4, pA.15 and elsewhere	Use consistent spelling throughout.	Marcus Phillips						
27	11-Mar-11	Main Report	Section 4 p4A.1	"Further detail in Appendix ****"	Provide appendix reference and check for missing references throughout the SMP2 documents.	Marcus Phillips						

Item Number	Date Matter raised	Document Reference (click arrow to select from list)	Table/Appendix and/or Sub Para number	Matters Identified by Members	Action Required	Comment provided by:	Response from CSG	Section Amended (New para nos and Table nos used in this column)	SMP Review	Action Required	Comment provided by:	Date comment provided
28	11-Mar-11	Main Report	Section 4 p4A.i an p4.1	Provide legends for all figures for example Figure on p4A.1 and elsewhere. Boundaries of PDZ are not clearly shown on Figure on p4Ai (in particular northern boundary of PDZ3). Figure on p4A.90 is not level (confirm level of beach crest, reference needs to be provided for 'the recent study').	Update figure/s provide additional information.	Marcus Phillips						
29	11-Mar-11	Main Report	Section 4 p4A.101	The scale of this (and other) figures does not make it easy to read. The extent of the Policy Units is not clear. No reference to PU 3.2 or 3.5 (cf Figure on p4A.73). [MP] Maps lose resolution when zooming in to view detail that is referred to in text making it difficult to comment on the issues raised or to validate the options being proposed. I can't see how the public could have been clear how the choices really affected them. [DH]	Suggest improving the legibility of figures and adding any missing references. [MP] Resolve resolution issues and confirm this has not affected consultation responses. [DH]	Marcus Phillips David Harris						
30	11-Mar-11	Appendix C	p26 last para	Typo 'Ordinance Datum' should read 'Ordnance Datum.'	Spellcheck documents.	Marcus Phillips						
31	11-Mar-11	Appendix K	General	There is a discrepancy in the labelling of the appendices – I think the CSG is aware of this. (The WFD assessment is identified as Appendix H on the CD, but when the documents are opened, refer to Appendix K).	Please check and rationalise the labelling of the appendices.	Karl Fuller						
32	11-Mar-11	Main Report	Section 5	I think the issues of funding and affordability are considered by the plan and I particularly like Section 5 page 5-17. However I think this general overview of the issue may be overlooked by the reader who only looks at the local information. I think the plan would be improved by adding some explanatory text below the Economic Summary tables in the Management Summaries. Even strongly economically positive locations will have to compete for limited FCRM public funding, weaker economic cases are realistically unlikely to be prioritised for public funding...so what does this mean for local delivery of the plan policies? We need to ensure we set realistic and achievable local expectations.	Consider the addition of explanatory text to explain what the Economic summary table means, what is it saying to the reader?...what does it mean in terms of the timing of investment....what are the critical/key assumptions feeding this....what is the implication for attracting public FCRM funding...there is the opportunity here to "localise" the funding message.	Adrian Philpott						
33	11-Mar-11	Main Report	Section 4 Coastal Area - A - Page 4A.23	Should this be labelled as PDZ1?	Check and amend if necessary.	Adrian Philpott						
34	11-Mar-11	Main Report	Section 4 Coastal Area - A - Page 4A.32	Appears to be a problem with the formatting of the photos here.	Amend photo formatting here - review and amend as necessary throughout the documents.	Adrian Philpott						
35	11-Mar-11	Main Report	Coastal Area - C - Page 4C.6-5th Para	Typo - There are not There area.	Amend typo.	Adrian Philpott						
36	11-Mar-11	Main Report	Section 4 Coastal Area - C - Page 4C.8	Are the chainages for PDZ7,8 and 9 correct? They are the same as PDZ1,2 and 3.	Review and amend if required.	Adrian Philpott						
37	11-Mar-11	Main Report	Section 4 Coastal Area - C - Page 4C.116	Labelled as MA19 and MA20 should these be MA17 and MA18?	Review and amend if required.	Adrian Philpott						
38	11-Mar-11	Main Report	Section 4 Coastal Area - D - Page 4D.78	Should this figure include MA21?	Review and amend if required.	Adrian Philpott						
39	11-Mar-11	Main Report	Section 4 Coastal Area B - Page 4B-161	The map on page 4B - 161 has a problem with PU numbering - some repetition of numbering occurs.	Please correct map.	David Harris						

Item Number	Date Matter raised	Document Reference (click arrow to select from list)	Table/Appendix and/or Sub Para number	Matters Identified by Members	Action Required	Comment provided by:	Response from CSG	Section Amended (New para nos and Table nos used in this column)	SMP Review	Action Required	Comment provided by:	Date comment provided
1	11-Mar-11	Main Report	Sect 1.1 SMP map	This national SMP map is very out of date.	At this stage I suggest you remove this map. If EA are able to provide a version which they are content to have published they will advise.	Steve Jenkinson						
2	11-Mar-11	Main Report	Sect 1.1 p 1.2	Both Defra's MSfW and WAG's New Approaches Programme are referenced, but almost as discrete entities. This may also be a good place to confirm (this is my understanding) that WAG are content for Welsh SMPs to follow Defra 2006 guidance, noting their own supplementary guidance. Should we be referencing Defra PAG here – will the reader understand what this is and its relevance?	Suggest that the CSG re-words existing text to explain that Defra and WAG are promoting similar strategies. Also consider adding reference to SMP guidance and amending ref. to PAG.	Steve Jenkinson						
3	11-Mar-11	Main Report	Fig. 1.2	I like the map but St Ann's Head and Great Orme not shown. [SJ] Figure 1.2 does not correctly show the boundary of the SMP2 at St Ann's Head and Great Ormes Head refer to Figure 3.5 and App E, Figure 1.3 (p7) which do show the boundary correctly. There are a number of other versions of this figure throughout the document. [MP]	Would be helpful to add these as they are the boundary points. [SJ] Provide a consistent map which shows the SMP2 boundaries correctly in all SMP2 documents. [MP]	Steve Jenkinson Marcus Phillips						
4	11-Mar-11	Main Report	Section 1.1.1 1st para.	Last sentence regarding what happens following adoption is misleading.	I suggest this is reworded to explain that strategy studies are one of a number of implementation activities.	Steve Jenkinson						
5	11-Mar-11	Main Report	Section 1.1.1 3rd para. & poss. elsewhere	Current preference is not to use "SMP2" term, simply "SMP".	Amend text.	Steve Jenkinson						
6	11-Mar-11	Main Report	Sect 1.1.3	Some long chunks of text.	Some para. breaks would help readers.	Steve Jenkinson						
7	11-Mar-11	Main Report	Sect 2.1.1	Table 1.1 is a very useful summary, but it prompted a couple of further questions. What is meant by West of Wales in this context – does this include any designated area that is on or includes the coast? Also, presumably some of these areas overlap?	I suggest a couple of notes to clarify or references to mapping elsewhere to help explain.	Steve Jenkinson						
8	11-Mar-11	Main Report	Sect 3.2	Para. 4 references the NCERM system, noting that it has been updated, but I am not sure what readers will know of NCERM at this stage.	Could the CSG clarify the position with regard to NCERM for this stretch of coast and consider whether discussion about an update needs further clarification?	Steve Jenkinson						
9	11-Mar-11	Main Report	Section 4.3.3	Section 3.5 introduces PDZs as high level divisions of the coast, and within these nest Management Areas and Policy Units. Section 4 presents Coastal Areas. There is some risk of confusion here. [SJ] The text structure in the Coastal Sections is based on PDZ's not PU's where the policy management option is determined. This makes it difficult to relate the relevant text to the PU and its Policy Option. This structure then changes in PDZ6 where it is structured to match the PU. There is a lack of consistency here as well. [DH]	The CSG should consider taking out the "Coastal Area" label and simply discuss each area by name eg. West Pembrokeshire, Cardigan and so forth. [SJ] Reconsider text structure for final version so links between text and PU's are clear at PU level. [DH]	Steve Jenkinson David Harris						
10	####	Appendix C Annex 1	Figures	Some of these figures could do with enlarging eg. Figure 1 warrants a page to itself in my view to aid readability.	Consider enlarging figures.	Steve Jenkinson						
11	11-Mar-11	Appendix C Annex 4	Maps	The NAI and WPM maps present erosion lines, flood risk areas, conservation areas and scheduled monuments. I do not recall seeing any maps showing agricultural land classification areas or critical infrastructure?	Has any consideration been given to including mapping showing agricultural areas, critical infrastructure – these would be useful enhancements?	Steve Jenkinson						
12	####	Appendix C Annex 1	Figure 2	Refers to "current observations" in the key.	It would be helpful to clarify that this is UKCP09 H++.	Steve Jenkinson						
13	####	Appendix F	Footer	Footer reads "Appendix H".	Amend.	Steve Jenkinson						

Item Number	Date Matter raised	Document Reference (click arrow to select from list)	Table/Appendix and/or Sub Para number	Matters Identified by Members	Action Required	Comment provided by:	Response from CSG	Section Amended (New para nos and Table nos used in this column)	SMP Review	Action Required	Comment provided by:	Date comment provided
14	11-Mar-11	Main Report	Section 2	This section summarises the SEA and HRA, but I did not see anything covering the WFD assessment. Also, with respect to the HRA, it would be helpful to summarise the conclusion of the Appropriate Assessment and any follow on actions.	When the final report is prepared I suggest that a section on WFD is added, and that the key outcomes from all of the assessments are summarised in this section of the report.	Steve Jenkinson						
15	11-Mar-11	SEA Report	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.	Plural? Need to correct.	Liz Galloway	Comment Please					
16	11-Mar-11	SEA Report	4.5.8.	These include many schedule(s)d monuments	Typo – need to correct.	Liz Galloway	Comment Please					
17	11-Mar-11	Main Report	Coastal D, page 4D.92	The flood risk maps shown do not cover all of the area being described. Given the risks described this would have been helpful.	Recommend that additional flood risk maps are inserted to cover all areas at increased future risk.	Nicola Rimington						
18	11-Mar-11	Appendix C Annex 4	NAI Maps	The NAI erosion maps in Annex 4 have a 2m erosion line in addition to the 20/50/100 scenarios. It's unclear what the purpose of this is? Also it doesn't help clarify the maps given the scale of these and now having 4 lines.	Can the CSG please clarify? And does the team consider the scale of maps are satisfactory and will allow correct interpretation by other stakeholders, especially as the WPM map looks very similar?	Jim Hutchison						
19	#####	Appendix F	Annex 1	The last column reads "MDFS".	Presumably this should be "MDSF"; if so please correct.	Jim Hutchison						
20	11-Mar-11	Various locations, particularly at the start of new sections	General	Photos have been used in a number of places throughout the document and it would be useful if a caption could be provided to confirm the location for all photos (in particular where photos are included at the start of new sections of the document). [MP] Photographs between sections are good but should be annotated with location - think readers generally like to know the photograph location. [APh]	Provide captions for all photos. [MP] Suggest annotate photographs with location. [APh]	Marcus Phillips Adrian Philpott						
21	11-Mar-11	Main Report	Section 5	Unfortunate use of the vague headings such as 'erodable frontages' and 'coastal sediment features'	Suggest using more appropriate technical headings.	Marcus Phillips						
22	11-Mar-11	Main Report	Section 5	The following statement 'The SMP delivers a plan for the management of risk from tidal flooding and erosion, setting policy solely for coastal defence' should be updated to refer to coastal erosion and flood risk management not defence. Also poorly worded second paragraph.	Update text.	Marcus Phillips						
23	#####	Main Report	Section 5	Typo in title for Box 5.1 p5.7.	Amend.	Marcus Phillips						
24	11-Mar-11	Main Report	Economics summary tables p4A.104 and Table 6.4 onwards	In a number of locations the timescale for the three epochs is quoted as 'now through to 2025', '2025 to 2055' and '2055 to 2105'. Surely these should read '2011 to 2031', '2031 to 2061' and '2061 to 2111'. HRA refers to Epoch 1, 2 and 3 (p 4A.70).	Update text which needs to be consistent throughout the SMP2 document.	Marcus Phillips						
25	11-Mar-11	All	Document Approval Page (prior to contents page)	The "Checked by" and "Approved by" sections are blank. Also, the client for the SMP is stated as Pembrokeshire County Council, as opposed to the Coastal Group?	Please clarify the status of these documents. Also please clarify the client.	Marcus Phillips						
26	11-Mar-11	Various	Various	The spelling of St Ann's Head varies throughout the documents (and figures) between 'St Ann's Head' and 'St Annes' Head' for example on the flow chart, Section 4 Introduction, p4A.1, p4A.8, Section 5 p 5.2, p6.1, p6.4, pA.15 and elsewhere	Use consistent spelling throughout.	Marcus Phillips						
27	11-Mar-11	Main Report	Section 4 p4A.1	"Further detail in Appendix *****"	Provide appendix reference and check for missing references throughout the SMP2 documents.	Marcus Phillips						

Item Number	Date Matter raised	Document Reference (click arrow to select from list)	Table/Appendix and/or Sub Para number	Matters Identified by Members	Action Required	Comment provided by:	Response from CSG	Section Amended (New para nos and Table nos used in this column)	SMP Review	Action Required	Comment provided by:	Date comment provided
28	11-Mar-11	Main Report	Section 4 p4A.i an p4.1	Provide legends for all figures for example Figure on p4A.1 and elsewhere. Boundaries of PDZ are not clearly shown on Figure on p4Ai (in particular northern boundary of PDZ3). Figure on p4A.90 is not level (confirm level of beach crest, reference needs to be provided for 'the recent study').	Update figure/s provide additional information.	Marcus Phillips						
29	11-Mar-11	Main Report	Section 4 p4A.101	The scale of this (and other) figures does not make it easy to read. The extent of the Policy Units is not clear. No reference to PU 3.2 or 3.5 (cf Figure on p4A.73). [MP] Maps lose resolution when zooming in to view detail that is referred to in text making it difficult to comment on the issues raised or to validate the options being proposed. I can't see how the public could have been clear how the choices really affected them. [DH]	Suggest improving the legibility of figures and adding any missing references. [MP] Resolve resolution issues and confirm this has not affected consultation responses. [DH]	Marcus Phillips David Harris						
30	11-Mar-11	Appendix C	p26 last para	Typo 'Ordinance Datum' should read 'Ordnance Datum.'	Spellcheck documents.	Marcus Phillips						
31	11-Mar-11	Appendix K	General	There is a discrepancy in the labelling of the appendices – I think the CSG is aware of this. (The WFD assessment is identified as Appendix H on the CD, but when the documents are opened, refer to Appendix K).	Please check and rationalise the labelling of the appendices.	Karl Fuller						
32	11-Mar-11	Main Report	Section 5	I think the issues of funding and affordability are considered by the plan and I particularly like Section 5 page 5-17. However I think this general overview of the issue may be overlooked by the reader who only looks at the local information. I think the plan would be improved by adding some explanatory text below the Economic Summary tables in the Management Summaries. Even strongly economically positive locations will have to compete for limited FCRM public funding, weaker economic cases are realistically unlikely to be prioritised for public funding....so what does this mean for local delivery of the plan policies? We need to ensure we set realistic and achievable local expectations.	Consider the addition of explanatory text to explain what the Economic summary table means, what is it saying to the reader?...what does it mean in terms of the timing of investment....what are the critical/key assumptions feeding this....what is the implication for attracting public FCRM funding...there is the opportunity here to "localise" the funding message.	Adrian Philpott						
33	11-Mar-11	Main Report	Section 4 Coastal Area - A Page 4A.23	Should this be labelled as PDZ1?	Check and amend if necessary.	Adrian Philpott						
34	11-Mar-11	Main Report	Section 4 Coastal Area - A Page 4A.32	Appears to be a problem with the formatting of the photos here.	Amend photo formatting here - review and amend as necessary throughout the documents.	Adrian Philpott						
35	11-Mar-11	Main Report	Coastal Area - C Page 4C.6-5th Para	Typo - There are not There area.	Amend typo.	Adrian Philpott						
36	11-Mar-11	Main Report	Section 4 Coastal Area - C Page 4C.8	Are the chainages for PDZ7,8 and 9 correct? They are the same as PDZ1,2 and 3.	Review and amend if required.	Adrian Philpott						
37	11-Mar-11	Main Report	Section 4 Coastal Area - C Page 4C.116	Labelled as MA19 and MA20 should these be MA17 and MA18?	Review and amend if required.	Adrian Philpott						
38	11-Mar-11	Main Report	Section 4 Coastal Area - D Page 4D.78	Should this figure include MA21?	Review and amend if required.	Adrian Philpott						

Item Number	Date Matter raised	Document Reference (<i>click arrow to select from list</i>)	Table/Appendix and/or Sub Para number	Matters Identified by Members	Action Required	Comment provided by:	Response from CSG	Section Amended (New para nos and Table nos used in this column)	SMP Review	Action Required	Comment provided by:	Date comment provided
39	11-Mar-11	Main Report	Section 4 Coastal Area B - Page 4B-161	The map on page 4B - 161 has a problem with PU numbering - some repetition of numbering occurs.	Please correct map.	David Harris						

Annex II – MR Policies Impacting Key SSSI Freshwater / Terrestrial Habitats

Intentionally blank page.

Annex IIa – Potential Compensatory SSSI / BAP Habitat Requirements for those Policy Units where MR is Proposed

PDZ Unit	Policy	SSSI	Key Freshwater and Terrestrial Habitats	MR Impact (Yes/no) and Total Compensation Required
10.4	MR, NAI, NAI	Dyfi	Improved grassland	Yes. Potentially 9.04 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Dyfi SSSI
10.5	HTL, HTL, MR		Fen-Marsh-Swamp	Yes. Potentially 137.60 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Dyfi SSSI.
10.6	HTL, HTL, MR		Bogs	Yes. Potentially 295.915 ha of bog habitat to be created preferably adjacent to the lost habitat within the Dyfi SSSI.
10.6	HTL, HTL, MR		Fen-Marsh-Swamp	Yes. Potentially 295.915 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Dyfi SSSI.
10.7	HTL, HTL, MR		Fen-Marsh-Swamp	Yes. Potentially 52.15 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Dyfi SSSI.
10.10	MR, MR, MR		Fen-Marsh-Swamp	Yes. Potentially 29.34 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Dyfi SSSI.
10.15	MR, MR, MR		Fen-Marsh-Swamp	Yes. Potentially 11.88 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Dyfi SSSI. However, managed realignment through allowing inundation into the area behind the dunes and earthworks could result in the creation of 18ha.

PDZ Unit	Policy	SSSI	Key Freshwater and Terrestrial Habitats	MR Impact (Yes/no) and Total Compensation Required
10.18	HTL, MR, MR	Broadwater	Fen-Marsh-Swamp	Yes. Potentially 58.74 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Broadwater SSSI.
11.6	HTL, MR, NAI	Aber Mawddach/Mawddach Estuary	Bogs	Yes. Potentially 0.772 ha of bog habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
			Broadleaved mixed yew woodland	Yes. Potentially 0.722 ha of broadleaved mixed yew woodland habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
11.9	HTL, MR, MR	Aber Mawddach/Mawddach Estuary	Fen-Marsh-Swamp	Yes. Potentially 45.46 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
11.9	HTL, MR, MR	Aber Mawddach/Mawddach Estuary	Bogs	Yes. Potentially 112.00 ha of bog habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
			Improved grassland	Yes. Potentially 64.49 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.

PDZ Unit	Policy	SSSI	Key Freshwater and Terrestrial Habitats	MR Impact (Yes/no) and Total Compensation Required
			Broadleaved mixed yew woodland	Yes. Potentially 11.18 ha of broadleaved mixed yew habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
11.10	MR, MR, MR		Fen-Marsh-Swamp	Yes. Potentially 45.46 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
			Improved grassland	Yes. Potentially 64.49 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
			Broadleaved mixed yew woodland	Yes. Potentially 0.9 ha of broadleaved mixed yew woodland habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
11.12	HTL,MR, MR		Fen-Marsh-Swamp	Yes. Potentially 42.13 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
			Improved grassland	Yes. Potentially 86.09 ha of improved grassland habitat to be created preferably adjacent to the

PDZ Unit	Policy	SSSI	Key Freshwater and Terrestrial Habitats	MR Impact (Yes/no) and Total Compensation Required
11.13	MR, MR, MR	Aber Mawddach/Mawddach Estuary		lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
			Broadleaved mixed yew woodland	Yes. Potentially 0.92 ha of broadleaved mixed yew woodland habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
			Fen-Marsh-Swamp	Yes. Potentially 23.98 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI. However, By Epoch 3, there is around 8ha of undeveloped land surrounding the MR areas which could be used to compensate for terrestrial / freshwater SAC habitats, with around 17ha in Epoch 2, and 33ha in Epoch 1, though the extents in Epoch 1 and 2 would disappear as realignments occurred.
			Broadleaved mixed yew woodland	Yes. Potentially 10.35 ha of broadleaved mixed yew woodland habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
			Improved grassland	Yes. Potentially 39.81 ha of improved grassland

Annex IV – MR Policies Impacting Key SSSI Freshwater / Terrestrial Habitats
SoEP West of Wales SMP2

PDZ Unit	Policy	SSSI	Key Freshwater and Terrestrial Habitats	MR Impact (Yes/no) and Total Compensation Required
				habitat to be created preferably adjacent to the lost habitat within the Aber Mawddach/Mawddach Estuary SSSI.
12.2	HTL, MR, MR	Morfa Dyffryn	Improved grassland	Yes. Potentially 0.31 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Morfa Dyffryn SSSI.
12.3	HTL, MR, MR		Improved grassland	No. In addition, there is around 20ha of land on Mochres which could be used in compensation in Epochs 2 and 3 for terrestrial / freshwater / dune habitat compensation. Alternatively, the area of compensation either at Morfa Mawr (up to 73ha) or south-west of Llanbedr (around 93ha) could provide areas suitable for creation and compensation of terrestrial / freshwater habitats.
12.11	MR, NAI, NAI	Morfa Harlech	Improved grassland	Yes. Potentially 172.11 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Morfa Harlech SSSI.
12.17	HTL, MR, MR	Tiroedd A Glannau Rhwng Cricieth Ac Afon Glaslyn	Improved grassland	Yes. Potentially 29.72 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Tiroedd A Glannau Rhwng Cricieth Ac Afon Glaslyn SSSI.

PDZ Unit	Policy	SSSI	Key Freshwater and Terrestrial Habitats	MR Impact (Yes/no) and Total Compensation Required
			Acid grassland	Yes. Potentially 24.04 ha of acid grassland habitat to be created preferably adjacent to the lost habitat within the Tiroedd A Glannau Rhwng Cricieth Ac Afon Glaslyn SSSI.
			Fen-Marsh-Swamp	Yes. Potentially 157.33 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Tiroedd A Glannau Rhwng Cricieth Ac Afon Glaslyn SSSI.
12.24	HTL, MR, MR	Glanllynau A Glannau Pen-Ychain I Gricieth	Standing open water	Yes. Potentially some standing open water habitat to be created preferably adjacent to the lost habitat within the Glanllynau A Glannau Pen-Ychain I Gricieth SSSI. However, By Epoch 3, there is around 25ha of undeveloped land surrounding the MR areas which could be used to compensate for terrestrial / freshwater habitats, with around 30ha available in Epoch 2, though the extent in Epoch 2 would disappear as encroachment of intertidal habitats occurs as a result of sea level rise.
			Improved grassland	Yes. Potentially some improved grassland habitat to be created preferably adjacent to the lost habitat within the Glanllynau A Glannau Pen-Ychain I Gricieth SSSI.

PDZ Unit	Policy	SSSI	Key Freshwater and Terrestrial Habitats	MR Impact (Yes/no) and Total Compensation Required
13.8	HTL, MR, MR	Mynydd Tir Y Cwmwd A'r Glannau At Garreg Yr Imbill	Broadleaved mixed yew woodland, Improved grassland, Fen-Marsh-Swamp, Arable	No. In addition, by Epoch 3, there is around 86ha of undeveloped land surrounding the MR areas which could be used to compensate for terrestrial / freshwater habitats, with around 122ha available in Epoch 2, though the extent in Epoch 2 would disappear as encroachment of intertidal habitats occurs as a result of sea level rise.
16.33	HTL, HTL, MR	Traeth Lafan / Lavan Sands, Conway Bay	Improved grassland	Yes. Potentially 141.56 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Traeth Lafan / Lavan Sands, Conway Bay SSSI.
			Standing open water	Yes. Potentially 0.62 ha of standing open water habitat to be created preferably adjacent to the lost habitat within the Traeth Lafan / Lavan Sands, Conway Bay SSSI.
16.5	HTL, MR, NAI	Y Foryd	Improved grassland	Yes. Potentially 141.56 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Y Foryd SSSI.
			Standing open water	Yes. Potentially 1.46 ha of standing open water habitat to be created preferably adjacent to the lost habitat within the Y Foryd SSSI.

PDZ Unit	Policy	SSSI	Key Freshwater and Terrestrial Habitats	MR Impact (Yes/no) and Total Compensation Required
			Fen-Marsh-Swamp	Yes. Potentially 18.73 ha of swamp habitat to be created preferably adjacent to the lost habitat within the Y Foryd SSSI.
17.10	MR, MR, NAI	Rhoscolyn Reedbed	Fen-Marsh-Swamp	Yes. Potentially 0.78 ha of fen-marsh-swamp habitat to be created preferably adjacent to the lost habitat within the Rhoscolyn Reedbed SSSI.
			Broadleaved mixed yew woodland	Yes. Potentially some broadleaved mixed yew woodland habitat to be created preferably adjacent to the lost habitat within the Rhoscolyn Reedbed SSSI.
			Improved grassland	Yes. Potentially 1.27 ha of improved grassland habitat to be created preferably adjacent to the lost habitat within the Rhoscolyn Reedbed SSSI.
			Dwarf-Shrub-Heath	Yes. Potentially 1.16 ha of improved dwarf-shrub-heath habitat to be created preferably adjacent to the lost habitat within the Rhoscolyn Reedbed SSSI.

Annex IIb - Areas of Freshwater / Terrestrial Compensatory Habitat Suitability for the West of Wales SMP2

Policy Unit		Area (ha) in Epoch		
		1	2	3
10.5	Afon Leri	-	-	19
10.6	Cors Fochno	-	-	151
10.7	Dyfi Junction	-	-	34
10.9	Machynlleth	-	71	65*
10.10	Pennal Valley	127	58*	19*
10.11	Gogarth	31	31*	31*
10.15	Penllyn	88 [#]	46 ^{*#}	26 ^{*#}
10.18	Dysynni Estuary	-	317 [@]	259 ^{*@}
11.6	Fairbourne Embankment	-	26	9*
11.9	Fegla	-	19	6*
11.10	Mawddach South Bank	15	9*	8*
11.12	Upper Estuary	70	42*	27*
11.13	Mawddach North	33	17*	8*
12.3	Arthro Estuary South ⁺	-	147	124*
12.7	Morfa Harlech	300	300*	300*
12.8	Harlech Valley	309	309*	309*
12.9	Talsarnau	-	48	11*
12.11	Upper Dwyryd Estuary	91	64*	25*
12.13	The Cob and Porthmadog	400	400*	400*
12.22	Dwyfor	75	64*	54*
12.24	Afon Wen	-	30	25*
13.8	Traeth Crugan	-	122	86*
Total		1,539	2,120	1,826

* Indicates that this habitat could initially be created in earlier Epochs.

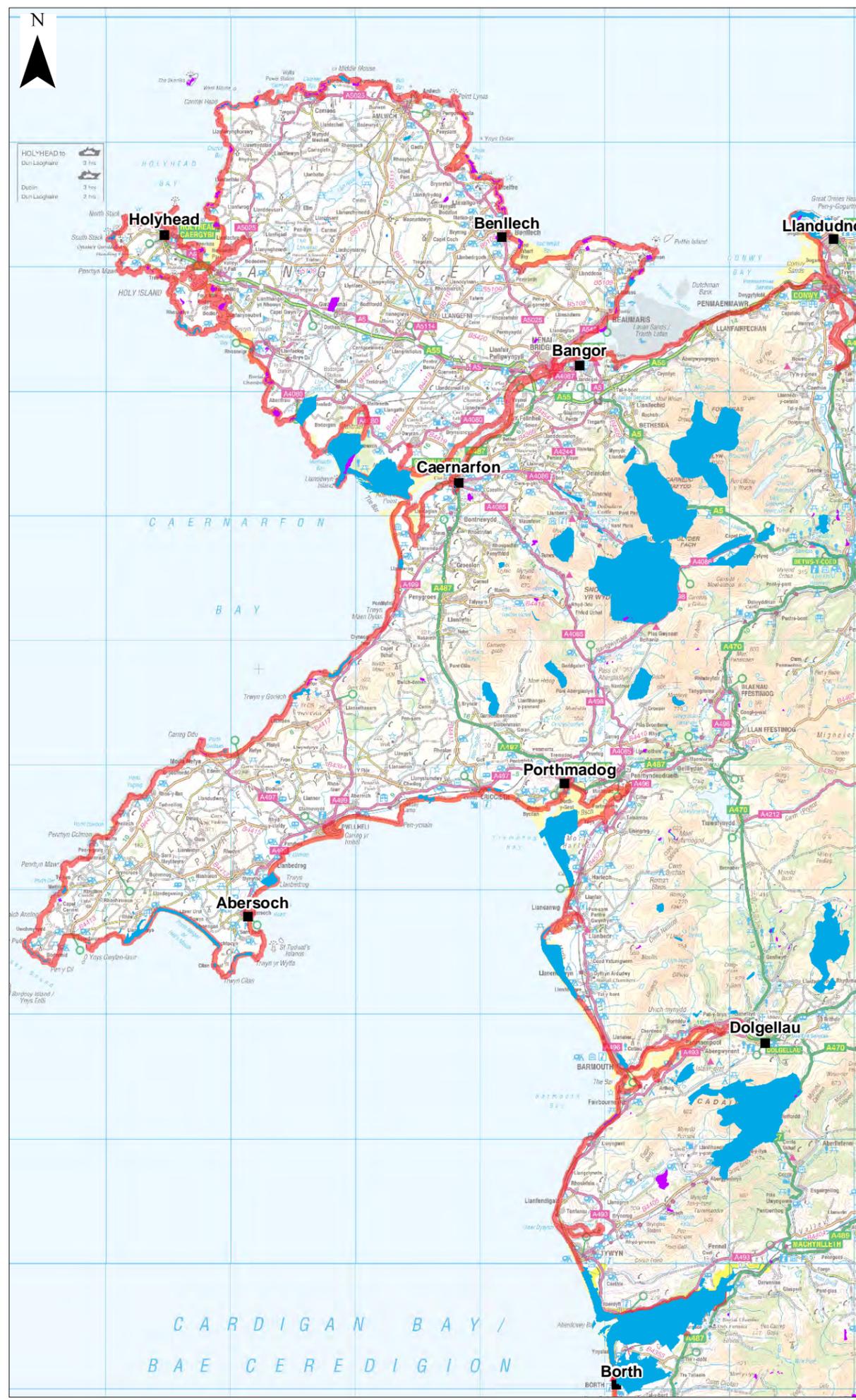
Indicates the extent less than (13ha) identified as appropriate for dune habitat development if required.

@ Contains 190ha of area contributed from upstream of the A493 crossing of the Dysynni.

+ Also includes up to 20ha for dune habitat creation/management/enhancement if required within this unit.

Annex III – RIGS and GCR Sites

Intentionally blank page.



- Key:
- RIGS Sites
 - GCRs
 - West Wales SMP2 Study Area

Title:
Key Geological Designations in the
West of Wales SMP2 Study Area

Project:
West Wales
Shoreline Management Plan 2

Date:
November 2009

Scale:
1:400,000

Figure:
7.1

