



West of Wales Shoreline Management Plan 2

Cardigan Bay & Ynys Enlli to the Great Orme Coastal Group

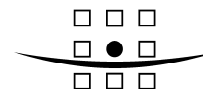
Appendix A
SMP Development

November 2011

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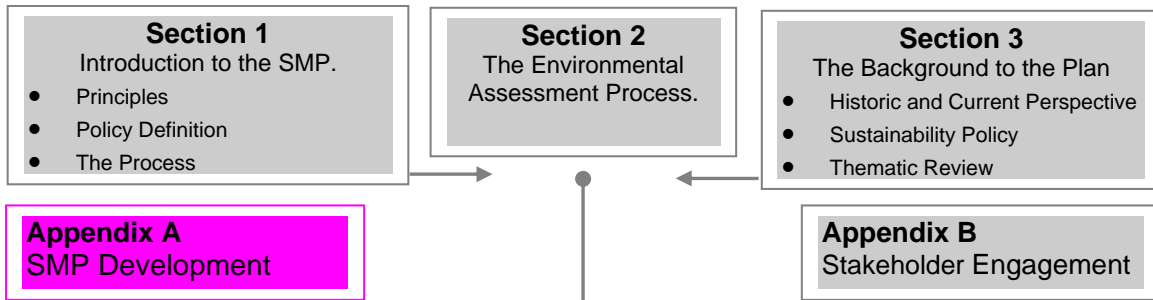
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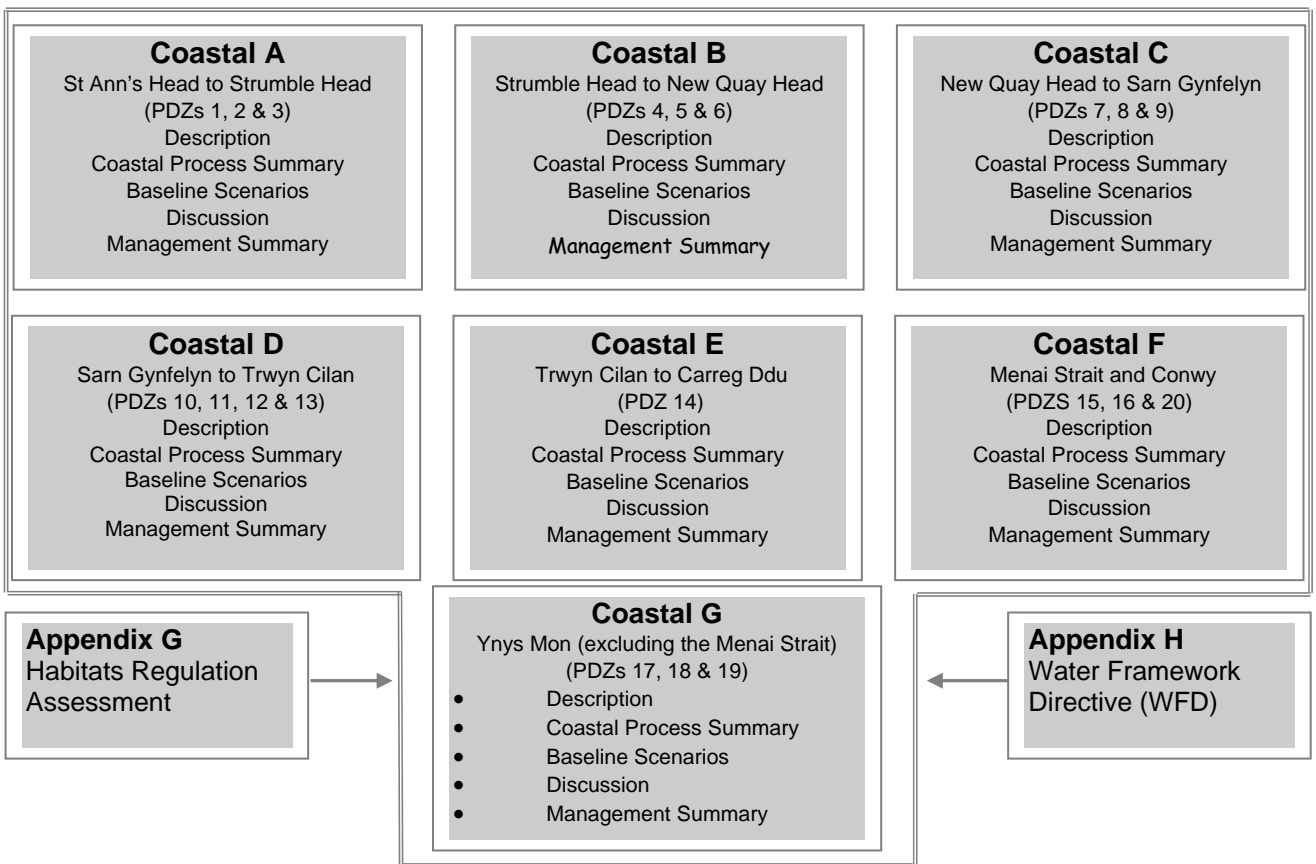
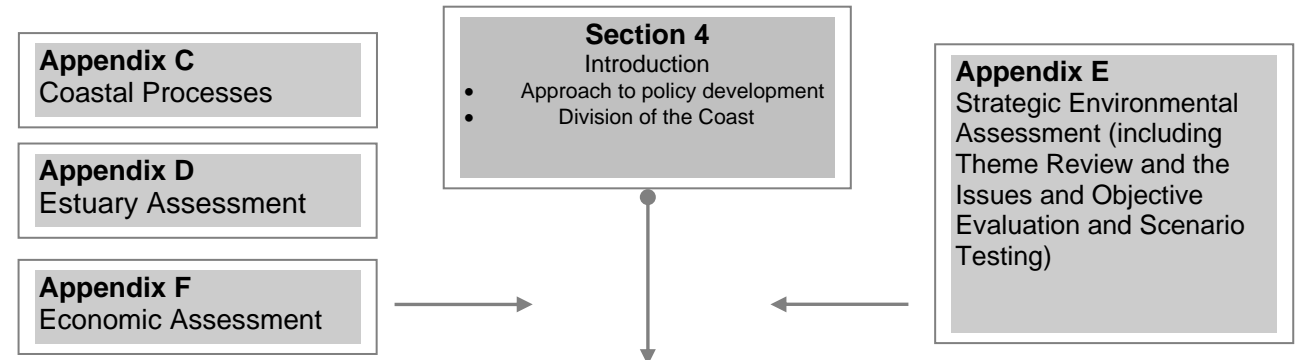
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Document title West of Wales Shoreline Management Plan 2
Cardigan Bay & Ynys Enlli to the Great Orme
Coastal Group
Document short title West of Wales SMP2
Status Final
Date November 2011
Project name West of Wales SMP2
Project number 9T9001
Client Pembrokeshire County Council
Reference 9T9001/R9T9001/AppendixA/301164/PBor

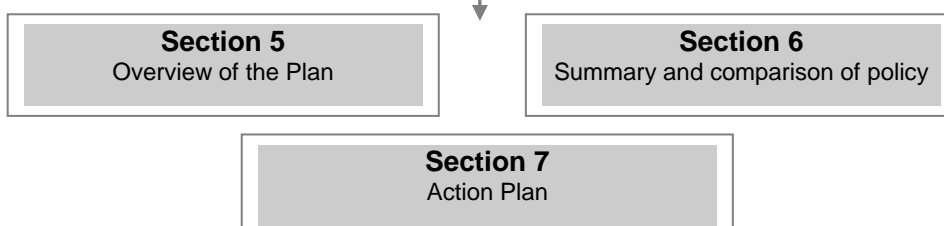
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Date/initials approval 29/11/11.



PLAN AND POLICY DEVELOPMENT



OVERVIEW



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The Supporting Appendices

This appendix and the accompanying appendices provide the supporting documentation for the Shoreline Management Plan. These documents illustrate the process undertaken in development of the final management policies and are included to ensure that there is clarity and transparency in this process. The appendices include:

Appendix A – SMP Development

This reports the history of development of the SMP, describing more fully the plan and policy decision-making process.

Appendix B – Stakeholder Engagement

This outlines the various stages of stakeholder involvement in the SMP process and summarises the findings of the stakeholder consultation at each stage.

Appendix C – Baseline Process Understanding

Includes baseline processes report, defence assessment and explanation of how sea level rise and climate change have been accommodated within these assessments.

Appendix D - Estuary Assessment

This report identifies and evaluates the environmental features (human, natural, historical and landscape).

Appendix E – Strategic Environmental Assessment (including the Issues and Objective Evaluation and Scenario Testing)

The SEA provides a systematic appraisal of the potential environmental consequences of high-level decision-making. This also includes the table of issues and objectives identified through the consultation process and description of how these were used and tested in developing the SMP.

Appendix F – Economic Appraisal

Presents the development of the economic analysis undertaken in support of the preferred plan.

Appendix G – Habitats Regulation Assessment

The appendix sets out the findings of the Appropriate Assessment of the Plan.

Appendix H - Water Framework Directive (WFD)

Presents the Water Framework Directive assessment with respect to the preferred plan.

Appendix I – Metadatabase and Bibliographic database

All supporting information used to develop the SMP is referenced for future examination and retrieval. This information is also provided as layers within a GIS.

A.1 INTRODUCTION

This appendix provides a full explanation of the Shoreline Management Plan (SMP) process adopted and description of the policy decision-making process and outlines the chronology of the SMP development.

A.1.1 What is the Shoreline Management Plan

A Shoreline **Management** Plan (SMP) provides a large-scale assessment of the coastline, including the risks to the developed, historic and natural environment associated with coastal evolution. This presents a policy framework to address these risks in a sustainable manner.

The SMP is a non-statutory, policy document for coastal defence management planning. It takes account of other existing planning initiatives and legislative requirements, and is intended to inform wider strategic planning. It is important to note that it does not set policy for anything other than coastal defence management. However, from this perspective, it aims to provide the context to, and consequence of management decisions in other sectors of coastal management.

A.1.2 Background to the West of Wales SMP (Sub cells 8d, 9a, 9b, 10a and 10b) SMP

This SMP covers the coastline between St Ann's Head and the Great Orme, including Ynys Mon. This covers approximately 1200km of shoreline. The Coast Protection Authorities for the area are Pembrokeshire County Council, Ceredigion County Council, Powys County Council, Gwynedd Council, Isle of Anglesey County Council and Conwy County Borough Council, with the Environment Agency Wales also having an Operating Authority role.

This SMP draws together a review of various first round SMPs. These were:

- The Cardigan Bay SMP1 2002, which comprised
 - St Govan's Head to the Teifi Estuary (*WS Atkins 2001*)
 - Central Cardigan Bay (*Posford Duvivier 2002*)
 - North Cardigan Bay (*Gwynedd Council Coast Protection Unit 2002*)
- Ynys Enlli to the Great Orme Head (*Shoreline Management Partnership 2002*)

Based upon the guidance at the time, policies were defined for a 50 year period.

A.1.3 The SMP Review

Recognising the need for review of the existing SMP policies, the two coastal groups formed a Client Steering Group (CSG) comprising representatives from the six operating authorities (voting members) and associate partners (non-voting members). The operating authorities include; Pembrokeshire County Council (Lead Authority), Ceredigion County Council, Gwynedd Council, Conwy County Borough Council, the Isle of Anglesey County Council and Powys County Council. The associate partners include Countryside Council for Wales, The Environment Agency Wales, Pembrokeshire Coast National Park Authority, Snowdonia National Park Authority, Cambria Archaeology, Gwynedd Archaeology, The Royal Commission for Ancient and Historic Monuments in

Wales, CADW, the Country Land and Business Association, the Welsh Assembly Government, Network Rail and The National Trust.

This CSG commissioned consulting engineers Royal Haskoning to revise the SMP on their behalf for the Sub-cells 8d (part of) 9a, 9b, 10a and 10b. The review was commissioned to take account of:

- Coastal strategies and studies undertaken since the previous SMP;
- Local Development Plans and economic development strategies in accordance with the Welsh Assembly Government planning guidance contained in TAN 14 and TAN 15.
- Revisions to the Defra Procedural Guidance for SMPs (including the need to define policy for 20, 50 and 100 year timeframes); and
- Changes in legislation such as the Water Framework Directive and the Habitats Directive.

A.2 PROJECT INFORMATION

A.2.1 SMP Background

This SMP is an update of the SMP1s identified above. The plan has been developed and produced in accordance with the latest Procedural Guidance (PG) for the production of SMPs (Defra). The development of the plan started in 2009 and is due to be finalised in 2011.

A.2.2 Client Steering Group

The coastline covered by this plan comes within the boundaries of six local authorities. They and the Environment Agency Wales have certain permissive powers for defending the coast. The local authorities generally deal with defences that protect the coast from erosion by the sea and the Environment Agency deal with flood risk management. Together they are required to produce an SMP for sustainable coastal defence management. This is achieved through the CSG comprising representatives from the six local authorities, the Environment Agency and other key bodies. The key bodies included the Countryside Council for Wales, who provide guidance on nature conservation, National Trust, Cambria Archaeology, Gwynedd Archaeology and the Royal Commission for the Ancient and historic Monuments in Wales and Cadw, who provide guidance on heritage issues, Network Rail and Pembrokeshire and Snowdonia National Parks, who are responsible for certain stretches of the coast. The Welsh Assembly Government have overall policy responsibility for flood and coastal risk in Wales including producing guidance and grant aid funding of the SMP.

The SMP was procured and lead by Pembrokeshire County Council and the following representatives made up the core members of the CSG:

Name	Representing
Emyr Williams	Pembrokeshire County Council (lead authority)
Richard Edwards Rhodri Llwyd	Ceredigion County Council
Huw Davies	Gwynedd Council
Graham Astley Simon Crowther	Powys County Council
Rowland Thomas	Isle of Anglesey County Council
Dyfed Rowlands Richard Evans	Conwy County Borough Council
Natalie Newton Kerry Thomas	Environment Agency Wales
Rod Jones	Countryside Council for Wales
Richard Ellis	National Trust
Sarah Middleton Peter Sedgwick Leslie Hatfield	Pembrokeshire National Parks Authority Network Rail
Kerry Keirle	Welsh Assembly Government

Name	Representing
Gregor Guthrie Claire Earlie Tara-Leigh Eggiman Victoria Clipsham Peter Thornton	Royal Haskoning

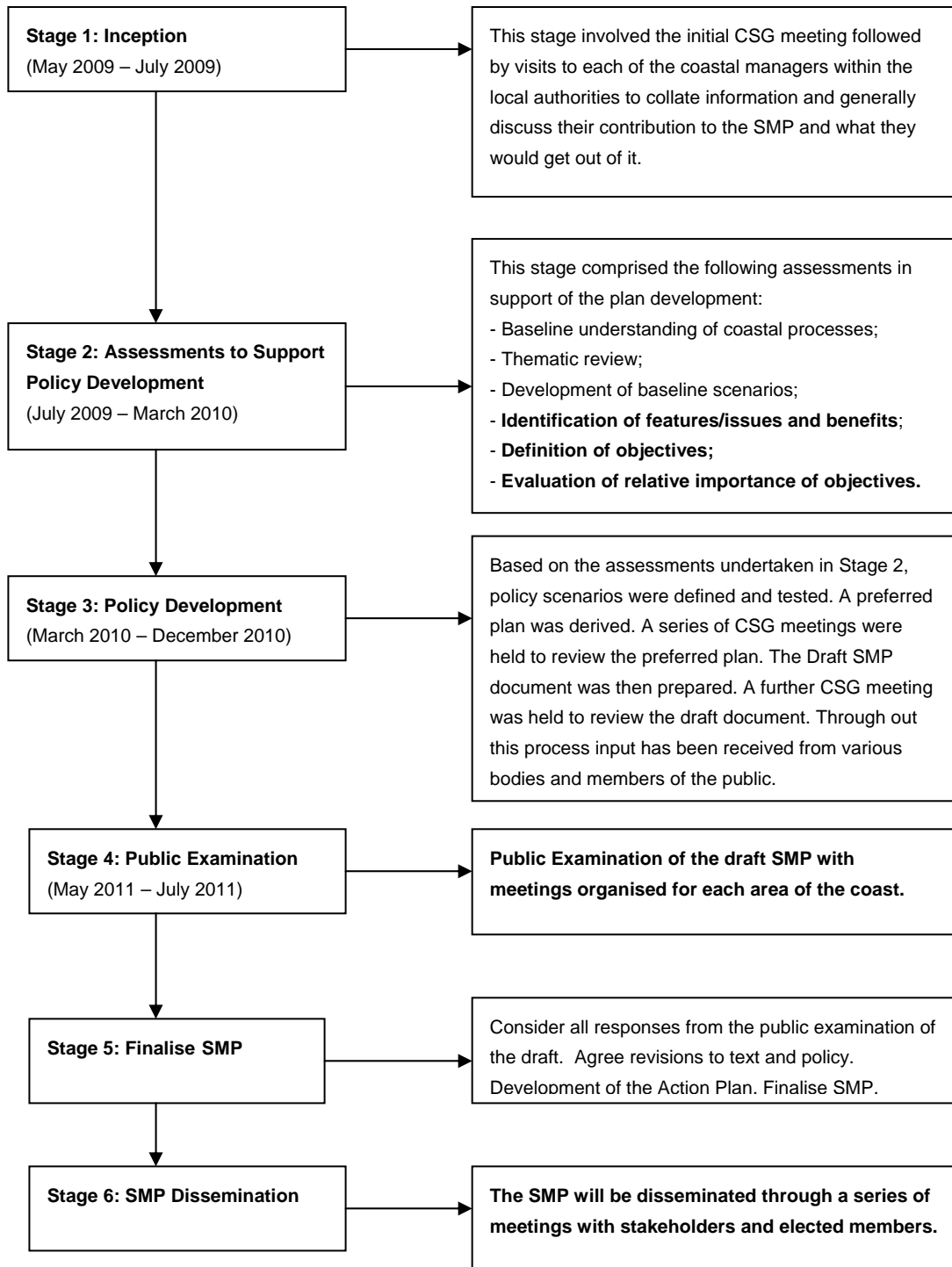
It was agreed that Pembrokeshire County Council would be the lead authority on behalf of the Client Steering Group (CSG) and as such were responsible for the financial management of the project, including grant aid submission and overall project administration. It was also agreed that all authorities would take on the responsibility of coordination of consultation activities. The CSG had overall responsibility for the delivery of the SMP and were involved throughout the development of the plan through review and guidance of work undertaken. The group will also oversee implementation of the SMP.

A.2.3 The Consultant

Royal Haskoning was commissioned by PCC to undertake the preparation of the SMP. There was a core team of four to ensure continuity and coherence throughout the project. Around this team, and incorporating as appropriate the specific skills of this core team, is the project management team, the review group and specialist groups. Royal Haskoning were supported by ABP Mer, who undertook the initial assessment of estuary behaviour.

A.2.4 SMP Programme

The following figure illustrates the different stages of the SMP process and indicates in bold where stakeholder consultation and contribution occurs.



A.3 STAGE 1: SMP SCOPE

A.3.1 SMP Boundaries

This SMP relates to Sub-cells 8d (part of) 9a, 9b, 10a and 10b covering the West of Wales coast, from St Ann's Head to the Great Orme.

A.3.2 Stakeholder Engagement Strategy

The stakeholder engagement for the SMP was agreed by all partners and coordinated by the lead authority Pembrokeshire County council. The stakeholder group comprised representatives from groups with local, regional and national interest in addition to site specific interests. Such a group was selected to try to achieve a 'holistic' consultation approach, taking consideration of all interests in the coast:

Stakeholder representatives included:

- County Councils
- Town Councils
- Parish/Ward Councils
- Residential Interest Groups
- Commercial interests eg. Harbour Commissioners
- Conservation bodies eg. National Trust
- Recreational groups
- Cultural and historic interest groups eg. Cadw

The first generation of SMPs identified most of the key stakeholders and these were collated into a database of names, organisations, positions and contact details.

The first round of consultation took place in the form of questionnaires being sent to key stakeholders, to obtain the features that key stakeholders regarded as valuable assets to the West of Wales coast.

The second stakeholder consultation meetings were held in December 2009 and January 2010 to ensure that the CSG had captured the key features from the first consultation period. Questionnaire responses and comments made during consultation were collated and recorded within a database. Evening public seminars were held in Broadhaven, Fishguard, Cardigan, Llangrannog, New Quay, Borth, Aberystwyth, Beaumaris, Barmouth, Tywyn, Pwllheli, Porthmadog and Llandudno. These raised awareness of the SMP as well as encouraging members of the local communities to register as key stakeholders.

Throughout the SMP process the webpage www.westofwalesmp.org has been established. This provides has provided an overview of the SMP process and was used to allow comments to be fed back from the public. The webpage now contains the full SMP document for public consultation.

A.3.3 Data Collection

Data collection was undertaken by Royal Haskoning. Data was collected from a variety of sources including stakeholders, local authorities, literature searches and web searches.

Key data sources included:

- Data from existing SMPs
- Data held within the local authorities

Base data:

- OS data

Defence data:

- Coastal Protection Survey
- Strategy Studies
- National Flood and Coastal Defence Database

Thematic data:

- National Trust
- Countryside Council for Wales
- Nature Conservation Designation information
- Historic Environment Records
- Studies/reports
- Site visits
- LGA Local Plans

Local and regionally specific data:

- Strategy Studies
- LGA Local Plans
- Stakeholder questionnaires and supporting information
- Technical reports

All of the data used in developing the SMP is referenced and recorded in the bibliographic database in Appendix I.

A.4 STAGE 2: ASSESSMENT TO SUPPORT POLICY DEVELOPMENT

A.4.1 Baseline Understanding of Coastal Behaviour and Dynamics

(a) Assessment of coastal processes and evolution

A desktop baseline review of coastal processes was produced using existing data (refer Appendix C). The baseline review includes statements on sediment sources, transport and sinks control and hydrodynamic interactions, shoreline movement and predictions of shoreline evolution. This assessment also includes the Estuaries Assessment, carried out by ABPmer (which sits in Appendix D). It underpins coastal process understanding of the study area and is the basis for the development of the baseline scenarios.

(b) Assessment of coastal defences

Coastal defence data was collated from the National Flood and Coastal Defence Database and the Local Authority Defence Databases and updated where data from more recent Coastal Strategy studies and inspections were available (refer Appendix C).

A.4.2 Baseline Scenarios

To assist in the development of future policy, future coastal response was assessed, assuming the following two baseline scenarios:

- 'No Active Intervention' (NAI) for which it is assumed that existing defences are no longer maintained and will deteriorate and fail with time or undefended frontages will evolve naturally; and
- 'With Present Management' (WPM) for which it is assumed that defences are maintained to provide a similar level of protection and defence to that currently provided. These assessments provide an understanding of the influence of defences on coastal behaviour and evolution.

These findings of the baseline scenarios were developed from the baseline processes report and the defence data. In addition, key references included; strategy studies, coastal protection survey and the existing SMP.

- The study frontage was divided into a number of areas, based on coastal processes and shoreline position was estimated for the three epochs of 20, 50 and 100 years (taking sea level rise into account).
- The predicted shoreline positions for the three epochs were mapped on GIS. Maps showing the predicted position of the coast, together with flood risk areas are included within Appendix C.
- Summary statements were produced for both 'No Active Intervention' and 'With Present Management' and are discussed in Section 4 of the main report as part of the development process of the plan.
- The mapped shoreline positions show the estimated maximum extent of change and are a combination of evidence from monitoring or comparison of historical maps together with geomorphological interpretation.

A.4.3 Strategic Environmental Assessment (Definition of Features, Benefits and Issues)

(a) Natural and Built Environment Baseline (Theme Review)

In the first instance, many of the important features along the coastline were identified during the theme review. The theme review involved drawing information from the existing SMP and the newly procured data regarding the following themes:

- Landscape and nature conservation;
- Historic environment; and
- Current and future land use.

The full Natural and Built Environment Baseline is included in Appendix E.

From this baseline, features of historical, cultural, recreational and environmental value were identified and mapped on GIS. For the purposes of the SMP a feature was defined as:

Something tangible that provides a service to society or benefits society by its existence.

It was essential to first identify the features on the coast in order to be able to then identify the 'issues' or concerns relating to these features and subsequently develop 'objectives' or what we are aiming to achieve or support through the development of shoreline management policies.

(b) Stakeholder Consultation

The first round of stakeholder consultation was utilised to not only inform the stakeholders of the what the SMP process entailed, but also to find out from them what 'features' they valued on the coast and any 'issues' or concerns they had (refer Appendix B).

(c) Issues Table

From the theme review and the stakeholder consultation, the Issues Table was developed (refer Appendix E). The Issues Table outlined the following elements:

- Location
- Feature
- Issues associated with feature
- Is it a flood and coastal defence issue?
- Does this issue affect policy?

The Issues Table was issued to the CSG, KSG, EMF and open public for review.

A.4.4 Definition of Objects

The next stage was to use the features, issues and benefits identified to define objectives within the context of the characterisation of the coast. The objectives were aimed to state simply and succinctly what we aimed to achieve with regard to each feature through the coastal defence management policies.

Further consultation with CCW and planning officers from Local Authorities was undertaken in determining the objectives to ensure that the SMP objectives were consistent with other planning documents and aspirations for the coast.

Objectives are used in two ways within the development of the SMP; first to guide the selection of policy options (the reasons for management), the second at the end of the process to assess the degree to which any SMP policy scenario delivers aim of the SMP.

It should be noted that although the objectives are defined in relation to key issues identified through consultation and have been used to guide development of the plan, not all objectives will be met. It is, however, important that issues are identified in defining those aspects of the coast that need to be considered.

A.4.5 Identification of Flood and Erosion Risks

In addition to the SMP, Royal Haskoning were commissioned to undertake a review and update of the National Coastal Erosion Risk Mapping for these sub cells allowing for the influence of sea level rise. The mapping of predicted shoreline change for the 'No Active Intervention' scenario along with the Environment Agency's IFM data, was used as a baseline against which features at risk, from coastal flooding and erosion, were identified. This approach highlighted what features were potentially at risk in 0-20 years, 20-50 years and 50-100 years.

A.4.6 Assessment of Objectives

To gain further appreciation of the priority level of the objectives generated, six fundamental questions were addressed:

- What are the Benefits? / Why is the issue important?
- Scale of importance? Local, regional, national or international.
- Who are the beneficiaries?
- What could affect the features value /sustainability? What threats are there?
- Is there enough of this benefit? The scarcity of the benefit at the scale at which it is important.
- Is there potential for substitution of the benefit?

The answers to these questions were determined from the theme review and were taken back to the Stakeholders in the 2nd round of consultation for review, discussion and confirmation.

While it is clearly possible to prioritise objectives in certain ways within themes, such as in the effective hierarchy defined by international, national or local environmentally designated site, due to the nature of the coast; its relatively distinct nature, such a crude reflection of priority was not fully helpful. Such an approach, it was felt would not give due weight to the often quite local issues on the coast.

Such weighting was also found to be difficult in assessing objectives across themes.

“i.e. one town can be compared to another town, but the importance of a town can not be directly compared to that of a designated conservation site.”

In many ways, such a strict approach could engender conflict rather than attempt to resolve issues to mutual benefit. This was discussed with the Project Group and it was agreed that there was this close interaction between themes. For example, natural eroding cliffs provide sources of sediment to the coastal system and maintain geological exposures. However, if properties, business or listed structures are at risk from such erosion, a conflict between two themes may arise. To address this the development of policy needed to be taken from a very holistic attitude; one that could only really be achieved through considering an area’s values and aims in a complete way, before examining how different policies might be applied to deliver that overall value. This also implied that consideration of policy needed to be taken to a relatively high level of detail. At the same time it was essential that the overall broader picture was maintained.

A.4.7 Characterisation of the Coast

An important step in this development was to gain an appreciation of the overall character of different areas of the coast. This would then set the broad context or overarching principles within which more specific objectives for coastal defence management could be sensibly developed and considered. A characterisation of the coast was, therefore, prepared on the basis of local planning documents, the theme review, discussions with members and the consultation responses. The characterisation of the coast comprised a general description and derivation of key values for an area. In addition, the key environmental designations were identified, together with an initial identification of features at risk based on a policy of no further intervention. A brief assessment was also considered as to the degree to which the coast wishes to change; the inherent pressure any intervention on the coast would bring about. The characterisation was reviewed by the project partners and commented upon during the consultation period.

General principles were developed to provide a framework within which to assess local objectives. These basic principles were used to set high level objectives which reflect the specific character of each section of the coast.

The General Principles agreed were:

- To contribute to sustainable communities and development.
- To minimise reliance on defence and increase the resilience of communities.
- To support an integrated approach to spatial planning, in particular recognising the interrelationships between:
 - Centres of development and surrounding communities.
 - Human activity and the natural and historical environment as being essential for community identity, well being and vitality and its significance for tourism and economic regeneration.
- To maintain and support the main centres of economic activity.
- To sustain the vitality and support adaptation of smaller scale settlements.
- To avoid damage to and seek opportunity to enhance the natural environment.
- To support the cultural heritage and the use of the Welsh language.
- To maintain or enhance the high quality landscape.

- To sustain sustainable accessibility in terms of maintaining national and regional connectivity.

A.4.8 Mapping

Figures produced in the SMP2 are derived from mapping within the GIS. Current mapping available to the study partners was provided in 2010. Some areas of baseline maps may have been updated since that time, during the preparation of the SMP2.

The GIS presents data at different scales of mapping, appropriate to the scale of the information being viewed. However, for consistency all mapping of information has been carried out based on the 1:10,000 baseline maps

A.5 STAGE 3: POLICY DEVELOPMENT

A.5.1 Definition of Policy Scenarios

In developing policy, a nested approach was taken, maintaining the overview, while still addressing usefully the more local issues in setting policy. The approach looked to define overarching aims, in part from the characterisation, over certain sections of the coast through which more detailed policies may be developed for shorter sections of the coast.

The two baseline scenarios of no active intervention and that of present management were used to explore where specific issues and objectives were or were not being addressed. This consideration being undertaken at a relatively high level within relatively long sections of the coast (called for convenience Policy Development Zones).

From this initial analysis primary drivers or controls were identified; where evident, and the basic interactions established. In many cases this then allowed quite obvious policies to be derived. However, where this was less clear, specific alternative scenarios were considered often at a more detailed level. Consideration of these scenarios has then been argued such that a preferred approach to management of the coast emerged. From this individual policy units were then defined.

The approach applies the basic principles set out in the Guidance:

- The process is clearly objective led.
- That the definition of policy and policy units is taken at the end of the analysis process, not predefining units at the start.
- That distinction is made relevant to each specific area of the coast as to prioritising objectives and that an initial screening process was undertaken at a high level to ensure essential objectives were considered initially.
- That, while able to consider the detailed issues important to direct coastal management, the broader picture of how the coast functions was maintained.

A.5.2 Policy Scenario Assessment

The final stage of the policy development was a detailed assessment of the policies in relation to the individual objectives. In association with this, economic data was obtained using the MDSF system and this together with information from various strategy studies was assessed to consider the economic cost effectiveness of the preferred policies.

The whole process maintains the broader awareness of how the coast as a whole is behaving and how policy may be used to develop a sustainable shoreline management in the future.

A.6 STAGE 4: PUBLIC EXAMINATION

Following the preparation and initial agreement to the Draft SMP2, the public consultation process will commence during May 2011 for a period of 3 months.

The draft plan together with supporting information will be established on the SMP2 website.

All stakeholders will be notified of the consultation process and, following notices in the local press, meetings will be held to allow discussion of the plan. Presentations of the SMP will be given at locations through the area.

Responses will be collated at these road shows and during the consultation period and form part of Appendix B.

A.7 STAGE 5: FINALISE PLAN

The issues raised through the consultation on SMP2 are to be identified in the consultation report. These issues and further information will be assessed and revisions made. These revisions will be identified in the consultation report to be included in Appendix B.

With these amendments made, the SMP2 will be finalised in agreement with the CSG. A final dissemination of the findings of the plan is to be undertaken and the SMP2 will be taken forward to each Council for adoption and approval by the Welsh Assembly Government.

A.8 DOCUMENT MAP

It is recognised that this is a large and complex document, which will be read and used by a wide range of people for different reasons and with different interests. The document has been prepared in such a manner to allow access to information at different scales and in addressing different issues.

The aim has been to allow people to review a summary of the draft plan and policies for each specific area. This is presented in Management Area Summaries. To gain an understanding of why specific policies are defined it is necessary to view the main discussion document presented as Section 4 of the main report. For further background information reference can then be made to Appendices. The main report is, therefore, structured with an introductory section (Sections 1, 2 and 3). This is followed by the discussion and development of the plan and policies (Section 4).

Section 5 provides a high level overview of the plan with a discussion of the key implications for management of the coast and the specific policies together with a comparison with previous SMP1 policies is presented in Section 6.

Section 7, the Action Plan, will not be finalised until after public consultation, although general actions are identified in Section 4 in the Management Area summaries