

Appendix A SMP Development

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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 – Natural and Built Environment Baseline

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

Appendix E – Issues and Objective Evaluation

This provides the table of issues and objectives identified through the consultation process and describes how these were used in developing the SMP.

Appendix F – Water Framework Directive Assessment

This presents an outline, by Jan Brooke, of Water Framework Directive considerations required in preparing SMP2. A checklist of the assessment of these considerations for each Management Area is also included.

Appendix G – Scenario Testing

Presents the results of the No Active Intervention scenario and the Preferred Plan in terms of achievement of objectives.

Appendix H – Economic Appraisal

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

Appendix I – Estuary Assessment

This provides the Estuary Assessment prepared by ABP Marine Environment Research Ltd (ABPmer) to determine the need (or otherwise) for the inclusion of the estuaries in the study area within the SMP process.

Appendix J – Metadatabase and Bibliographic database

All supporting information used to develop the SMP is referenced for future examination and retrieval.

A1 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.

A1.1 What is the Shoreline Management Plan?

A Shoreline Management Plan (SMP) provides a large-scale assessment of coastal the risks to the developed, historic and natural environment associated with coastal evolution and 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.

A1.2 Background to the North East Coast SMP

The coastline between the River Tyne and Flamborough Head was previously assessed as three separate SMP's. The extent, author and date of completion of these SMP's are summarised in the following table:

Sub-cell	Coastal extent	Author	Date of completion
1b	River Tyne to Seaham Harbour	Babties	March 1998
1c	Seaham Harbour to Saltburn	Babties	March 1999
1d	Huntcliffe (Saltburn) to Flamborough Head	Mouchel Consulting	September 1997

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

The SMP's were met with varying degrees of acceptance from the Local Authorities. The SMP for sub cell 1d was rejected by East Riding of Yorkshire Council and was therefore not adopted for implementation.

These three areas have now been combined in an attempt to gain a more holistic view of this coastline and to identify and assess the influence of interactions along the coastline on a broader scale.

A1.3 The SMP Review

Recognising the need for review of the existing SMP policies, the North East Coastal Group commissioned consulting engineers Royal Haskoning to revise the SMP for the North East Coast. The review was commissioned to take account of:

- Coastal strategies and studies undertaken since the previous SMP;
- Revisions to the Defra Procedural Guidance for SMPs (including the need to define policy for 20, 50 and 100 year timeframes);
- Changes in legislation such as the Water Framework Directive and the Habitats Directive.

A2 Project Information

A2.1 SMP Background

This SMP is an update of two previous SMP's originally produced by Babties and one produced by Mouchel Consulting. The review has been developed and produced in accordance with the latest Procedural Guidance (PG) for the production of SMPs (Defra) and is of the first second generation SMP to be produced, beyond the pilot SMPs that were produced as part of the testing and development of the Procedural Guidance.

A2.1 Project Management Group

The coastline covered by this plan comes within the boundaries of seven local authorities. They and the Environment Agency 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 SMP Project Management Group comprising representatives from the seven local authorities, the Environment Agency and other key bodies. The key bodies included English Nature, who provide guidance on nature conservation, National Trust, who provide guidance on heritage issues, North York Moors National Park who provide guidance on management of the natural and historical features of the National Park, and Defra, who have overall policy responsibility for flood and coastal risk in England including producing guidance and grant aid funding of the SMP.

The SMP was procured and lead by Scarborough Borough Council and the following representatives made up the core members of the Project Management Group:

Name	Representing
Chris Matthews Stewart Rowe Dave Williams (Principle Planning Officer)	Scarborough Borough Council (Lead Authority)
Len Selvaratnam Rob Lunan (Planning Officer)	Redcar & Cleveland BC
Ian Rutherford Daniel Grey	South Tyneside M.B.C.
Suzanne Jevons	East Riding of Yorkshire Council
Mike Ohlson Simon Longstaff Dolly Hannon (Planning Officer)	Easington D.C.
Alan Coulson Richard Waldmeyer Dave Thompson Mike Pearson	Hartlepool B.C.
Joe Rice Andrew Meara (Policy) Kev Shield	City of Sunderland

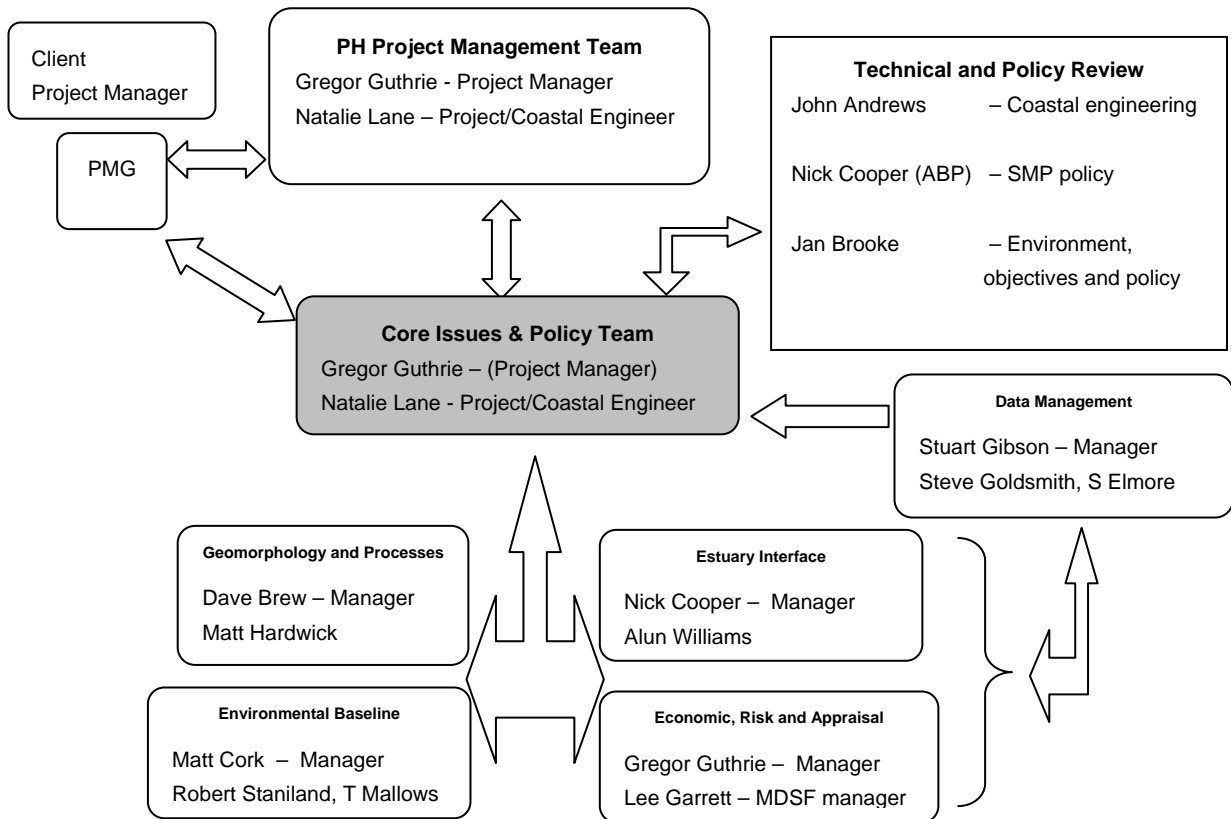
Additional attendees included:

Name	Representing
Robbie Fisher Mike Quigley (North East Region)	English Nature
Rebecca Chapman	Environment Agency
Jim Hutchison (Regional Engineer) Dr Andrew Parsons (Ass. Reg Engineer)	DEFRA
Val Dilcock (Chief Planning Officer)	North York Moors National Park
Alex Hunt (Regional Policy Officer)	National Trust
Cllr G Allanson (Chairman of LGA)	Local Government Association
Gregor Guthrie Natalie Lane	Royal Haskoning

It was agreed that Scarborough Borough Council (SBC) would be the lead authority on behalf of the North East Coast Group 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 SBC would take on the responsibility of data collation and coordination of consultation activities. The Project Management Group (PMG) 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.

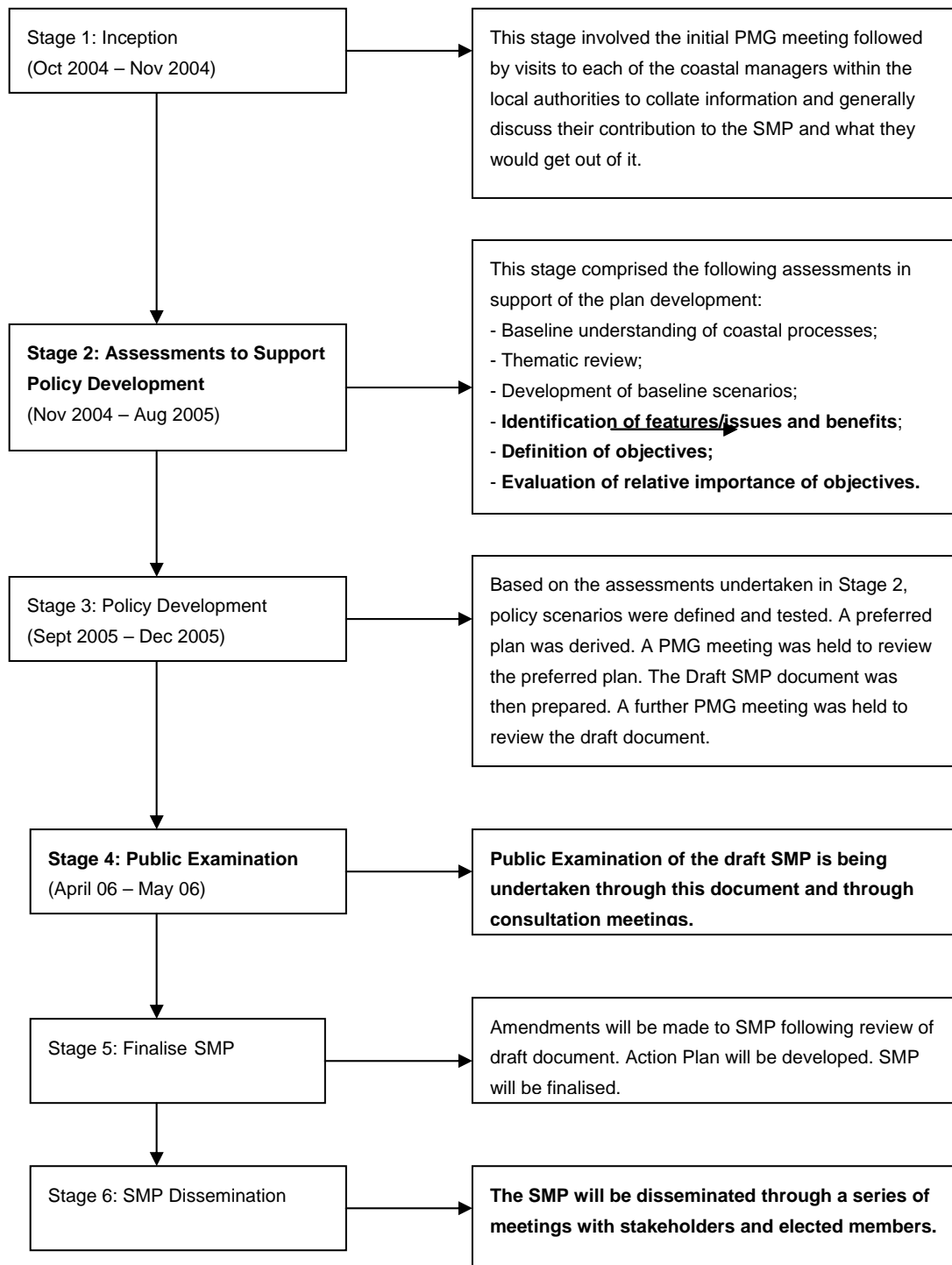
A2.3 The Consultant

Royal Haskoning was commissioned by SBC to undertake the preparation of the SMP. Royal Haskoning's team structure is set out below. There was a core team of two 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.



A3 SMP Programme

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



A4 Stage 1: SMP Scope

A4.1 SMP Boundaries

This SMP relates to Sub-cells 1a, 1b and 1c covering the area on the north east coast of England between the River Tyne in the north and Flamborough Head in the south.

A4.2 Stakeholder Engagement Strategy

The stakeholder engagement for the SMP was coordinated by the lead authority Scarborough Borough Council (SBC). 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 eg. Filey Against Dredging
- Commercial interests eg. Cleveland Potash Ltd, Northern Electrical Distribution Ltd
- Conservation bodies eg. National Trust, Durham Heritage Coast, RSPB
- Recreational groups
- Cultural and historic interest groups eg. English Heritage

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.

For the key stakeholders, the following approach was adopted:

- Approximately 774 questionnaires were mailed to stakeholders (refer Appendix B). The questionnaire requested a contact name and address, and any information relevant to the study area;
- Of the 774 questionnaires, 108 were returned and these responses were entered into the database;
- Any information/documents provided by the stakeholders were recorded within the bibliographic database (refer Appendix I).

Stakeholders were then invited to the first round of consultation meetings which were held in December 2004/ January 2005 in eight regional locations, namely:

- South Tyneside;
- Easington;
- Sunderland;
- Hartlepool;
- Redcar;
- Whitby;
- Scarborough; and,
- Filey.

The second round of stakeholder consultation meetings was held in the same eight locations in April 2005.

A4.3 Data Collection

Data collection was undertaken by the lead authority SBC. Data was collected from a variety of sources including stakeholders, local authorities, literature searches and web searches.

Key data sources included:

- Data from existing SMP's
- Coastal process data
- Characterisation information

Base data:

- OS data

Defence data:

- Coastal Protection Survey
- Strategy Studies

Thematic data:

- MAGIC website
- English Nature
- English Heritage
- Nature Conservation Designation information
- Futurecoast (shoreline features and dynamics)
- 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.

A5 Stage 2: Assessments to Support Policy Development

A5.1 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. 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 Coastal Protection Survey and updated where data from more recent Coastal Strategy studies was available (refer Appendix C).

A5.2 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 Futurecoast, 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.
- Summary statements were produced for both ‘No Active Intervention’ and ‘With Present Management’ outlining the estimated erosion rates and the residual life of the defences that the estimated shoreline position was based upon. The summary statements are connected to the GIS mapping via the database system.
- 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.

A5.3 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's and the newly procured data regarding the following themes:

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

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

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. This was undertaken by handing out and collecting responses to a question sheet at the consultation meetings (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 PMG for review.

A5.5 Definition of Objectives

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 English Heritage, National Trust 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.

A5.6 Identification of Flood and Erosion Risks

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.

A5.5 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, European 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, the natural functioning of the Durham Heritage coast was closely supported the regeneration effort within the town of Seaham but also that the town of Seaham and its wellbeing gives impetus towards the objectives of the Durham Heritage Coast). 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.

A5.6 Characterisation of the Coast

An important step in this development was to gain an appreciation 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 PMG 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. Refer Appendix E for the Characterisation of the Coast.

A6 Stage 3: Policy Development

A6.1 Definition of Policy Scenarios

In developing policy, therefore, 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 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.

A6.2 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.

A7 Stage 4 Public Examination

This document is prepared for public consultation. This will be reported more fully in the final Plan.

A8 Stage 5: Finalise Plan

The issues raised during consultation will be discussed in developing the final plan. Any revision from the draft will be highlighted in the final document.