

# **North Solent Shoreline Management Plan**

Appendix A: SMP Development



**Appendix A: SMP Development**

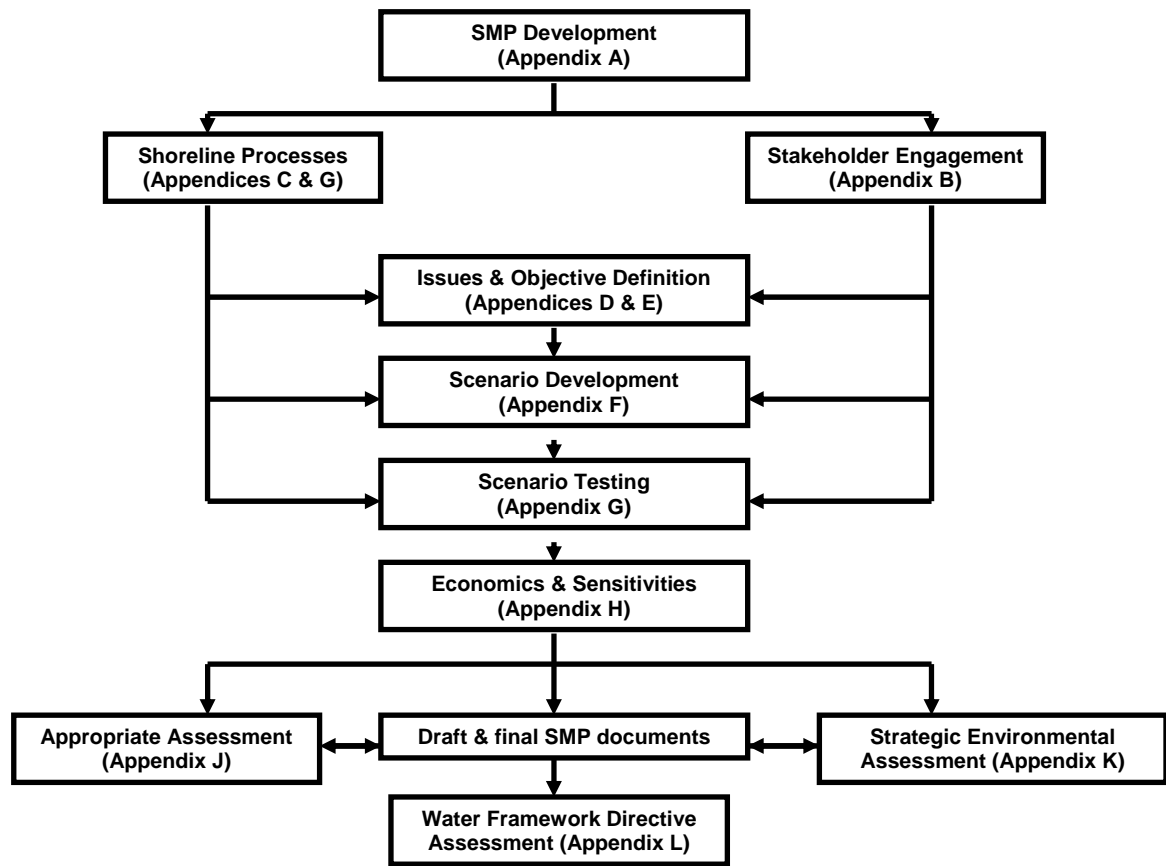
A1	Introduction	1
A1.1	What is the Shoreline Management Plan?	1
A1.2	Background to the North Solent SMP	2
A2	Project Information	3
A2.1	SMP Background	3
A2.2	Client Steering Group	3
A3	SMP Programme	5
A4	Stage 1: SMP Scope	7
A4.1	Define SMP Boundaries	7
A4.2	Stakeholder Engagement Strategy	7
A4.3	Data Collection	9
A5	Stage 2: Assessments to Support Policy Development	10
A5.1	Baseline Understanding of Shoreline Behaviour and Dynamics	10
A5.1a	Assessment of Coastal Processes and Evolution	10
A5.1b	Assessment of Coastal Defences	10
A5.2	Baseline Scenarios for Coastal Processes	10
A5.3	Theme Review	11
A5.4	Definition of Features, Benefits and Issues	11
A5.5	Issues and Objective Table	12
A5.6	Definition of Objectives	14
A5.7	Identification of Flood and Erosion Risks	14
A5.8	Assessment of Objectives	14
A6	Stage 3: Policy Development	16
A6.1	Definition of Policy Scenarios	16
A6.1a	Identification of Key Policy Drivers	16
A6.1b	Identification of Potential Policy Options	17
A6.2	Policy Scenario Assessment	18
A6.2a	Assessment of Shoreline Interactions and Response	18
A6.2b	Assessment of Achievement of Objectives	18
A6.3	Economic Appraisal	19
A6.4	Confirm Proposed Policy Scenario	21
A6.5	Draft SMP Document Preparation	22
A7	Stage 4: Public Examination	23
A7.1	Gain Approval in Principle to Proceed to Consultation	23
A7.2	Confirm Consultation Strategy	23
A8	Stages 5 & 6: Finalise Plan & Plan	24
A8.1	Dissemination	24

## The Supporting Appendices

All information used to support the Shoreline Management Plan is contained in a series of Appendices. In this way there is clarity in the decision-making process and the rationale behind the policies being promoted is both transparent and auditable. The appendices are:

<b>Appendix</b>	<b>Subject</b>	<b>Detail</b>
A	SMP Development	Reports the history of development of the SMP, describing fully the plan and policy decision-making process
B	Stakeholder Engagement	All communications from the stakeholder process are provided here, together with information arising from the consultation process
C	Baseline Process Understanding	Includes a baseline process report, defence assessment, NAI and WPM assessments and summarises data used in assessments
D	Theme Review	This report identifies and evaluates the environmental features (human, natural, historical and landscape)
E	Issues & Objective Evaluation	Provides information on the issues and objectives identified as part of the Plan development, including appraisal of their importance
F	Initial Policy Appraisal & Scenario Development	Presents the consideration of generic policy options for each frontage, identifying possible acceptable policies, and their combination into 'scenarios' for testing
G	Scenario Testing	Presents the policy assessment and appraisal of objective achievement towards definition of the Preferred Plan
H	Economic Appraisal & Sensitivity Testing	Presents the economic analysis undertaken in support of the Preferred Plan
I	Metadatabase and Bibliographic database	All supporting information used to develop the SMP is referenced for future retrieval and examination
J	Appropriate Assessment	Presents an assessment of the effect the plan will have on European sites
K	Strategic Environmental Assessment	Presents the various items undertaken in developing the Plan specifically related to the requirements of the EU Council Directive 2001/42/EC (Strategic Environmental Assessment Directive)
L	Water Framework Directive Assessment	Presents an assessment of the implications of the Water Framework Directive

The broad relationships between the appendices are as below:



# A1 INTRODUCTION

This Appendix provides a full explanation of the adopted Shoreline Management Plan (SMP) process, a 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 the risks associated with coastal evolution and presents a policy framework to address these risks to people and the developed, historic and natural environment 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 does not set policy for anything other than coastal defence management. There are four generic Defra policy options to choose from and they are:

- **Hold The Line (HTL)** - Maintain or upgrade standard of protection provided by defences. This policy should cover those situations where work or operations are carried out in front of the existing defences (such as beach recharge, rebuilding the toe of a structure, building offshore breakwaters, etc.) to improve or maintain the standard of protection provided by the existing defence line. This policy also involves operations to the back of existing defences (such as building secondary floodwalls) where they form an essential part of maintaining the current coastal defence system.
- **Advance The Line (ATL)** - construct new defences seaward of existing defences. Use of this policy should be limited to those policy units where significant land reclamation is considered.
- **Managed Realignment (MR)** - allowing the shoreline to move backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences).
- **No Active Intervention (NAI)** - a decision not to invest in providing or maintaining defence.

## A1.2 BACKGROUND TO THE NORTH SOLENT SMP

The North Solent SMP has been prepared based upon the revised Shoreline Management Plan Procedural Guidance (Defra, 2006). The SMP:

- takes account of latest coastal and estuarine studies
- identifies and maps the potential and residual tidal flood risk areas
- identifies shoreline erosion rates and maps coastal erosion risk areas
- takes account of issues identified by recent defence planning and recommended policies and management approaches from approved and draft coastal defence strategies  
takes account of changes in legislation and interpretation e.g. European Union Habitats Directive, Water Framework Directive
- identifies and accounts for changes in national flood and coastal defence planning requirements e.g. the need to consider a 100 year timeframe rather than the original 50 years in the first round of SMPs.

The coastline covered by this Plan comprises a complex variety of numerous small estuaries, harbours and tidal inlets, and the tidal extent of main rivers. It extends over the boundaries of 10 Local Authorities. The Operating Authorities (maritime Local Authorities and the Environment Agency) have certain permissive powers for defending the coast. The Local Authorities deal with defences which protect the coast from erosion by the sea. Unlike other regions, the EA have adopted only a few of the many flood defences, which are owned and managed by Local Authorities and private individuals. Some lengths of sea wall serve both coast protection and flood defence along their length.

## **A2 PROJECT INFORMATION**

### **A2.1 SMP BACKGROUND**

The North Solent Shoreline Management Plan (SMP) is the first combined revision of the Western Solent and Southampton Water SMP and the East Solent and Harbours SMP. The coastline covered by the Plan extends 386km between Selsey Bill, in the east, and Hurst Spit, in the west, and includes Southampton Water, and Portsmouth, Langstone and Chichester Harbours, and the tidal extent of the main rivers. The North Solent shoreline is atypical of much of the UK in that:

- 80% of shoreline has a European or International nature conservation designation as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and or Ramsar sites
- 76% of shoreline is defended with structures and/or beach management
- the majority of the existing defences have European and International nature conservation designated site(s) landward and seaward of the line of defence
- over 60% of the shoreline is privately owned or maintained
- the majority of the North Solent is developed with residential, commercial, industrial and agricultural development
- there is a paucity of habitat creation opportunities as demonstrated in the Solent Dynamic Coast Project (Cope et al., 2008)

The SMP has been developed and produced in accordance with the revised Procedural Guidance (Defra, 2006) for the second generation of SMPs. Considerable progress has been made with regard to the complicated issues relating to the appraisal and consideration of private landholdings, privately maintained and funded defences, inter-tidal habitat creation opportunities and strategic assessment of the function of European designated network of High tide roost and feeding sites.

### **A2.2 CLIENT STEERING GROUP**

Together the Operating Authorities are required to produce an SMP for sustainable coastal defence management. New Forest District Council is the lead authority in the development of the North Solent SMP. This is achieved through the auspices of a Client Steering Group (CSG) made up of the 10 Local Authorities, the Environment Agency and other key bodies (Table A1). Other members of the group are: Natural England, who provide guidance on nature conservation, and Hampshire County Council, West Sussex County Council, Chichester Harbour Conservancy, New Forest National Park



Authority, all of which have coastal management interests. The Client Steering Group comprised the following core members:

Name	Representing	
Professor Andy Bradbury (Project Director)	New Forest District Council/Channel Coastal Observatory	
Andrew Colenutt (Project Manager)		
Dr Samantha Cope, Malgosia Gorczyńska & Mark Stratton		
Karen Eastley	Test Valley Borough Council	
Rob Crighton & Bernardine Maguire	Southampton City Council	
Alun Brown	Eastleigh Borough Council	
Patrick Aust	Winchester City Council	
Scott Mills (formerly Dave Watkins, Arnold Browne)	Fareham Borough Council	
Bret Davies (formerly Mike Wheeler)	Gosport Borough Council	
Bret Davies (formerly Gower Lloyd)	Portsmouth City Council	
Lyall Cairns	Havant Borough Council	
Gavin Holder, David Lowsley	Chichester District Council	
Gary Lane (formerly Helen Dalton, Hannah Gribben & Nicola Smith)	Environment Agency Southern Region	
Ruth Jolley / Rebecca Reynolds / Emily Allison	Environment Agency Habitat Creation Programme	
Tim Kermod (formerly Karen McHugh & Ian Tripp)	EA Hampshire Area	EA Solent & South Downs
Nick Bean (formerly Christopher Smith & Gordon Wilson)	EA Sussex Area	
Paula Freeland & Nick Evans (formerly Steve Trotter)	New Forest National Park Authority	
Alison Fowler & John Davis	Chichester Harbour Conservancy	
Steve Blyth (formerly Alan Inder)	Hampshire County Council	
Glen Westmore (formerly Mark Elliott & Catherine Chapman)	West Sussex County Council	
Dr Claire Lambert & Tom Schindl (formerly Tony Cosgrove, Chris Pirie & Nikki Hiorne)	Natural England	
<b>Corresponding members</b>		
Andy Gilham	Environment Agency Sussex Area	
Bill Symons (Defra) - During the formative stages of the project only. Responsibility then passed to the EA Southern Region		

**Table A1** Client Steering Group

The Client Steering Group had overall responsibility for the delivery of the SMP and was involved throughout the life cycle of the SMP. As well as initiating the development process and defining the scope and extent of the SMP, they were responsible for managing the development of the SMP through guidance and review of work undertaken.

## A3 SMP PROGRAMME

Table A2 below provides an overview of the SMP process and the timetable of activities carried out during the SMP development.

<p><b>Stage 1</b> Scope the SMP</p>	<p>CSG meeting to decide SMP scope and approach (Dec 2006, Mar 2007) Stakeholder Engagement Strategy determined (Feb - May 2007) Analysis of Stakeholder feedback (Jun - Jul 2007) Data and information collected (Feb - Jul 2007)</p>
<p><b>Stage 2</b> Assessment to support the policy</p>	<p>Review, revision and assessment of coastal process and shoreline evolution, coastal defence assets data and information (Aug 2007 - Oct 2008) Baseline Scenarios developed (Feb - Oct 2008) Theme Review and mapping undertaken (Aug 2008 – Mar 2009) Identify and assessment of Features, Issues and Objectives (Aug 2008 - Mar 2009) Objectives set and ranked (Jan - Feb 2009) Incorporation of Stakeholder feedback (Aug - Nov 2007) CSG meetings to discuss assessments (Jul 2007, Jan, May, and Oct 2008) Environment Group to assist determination of Appropriate Assessment methodology (Jan, Mar 2008) EMG meeting to discuss assessments and objectives (Oct 2007, Aug, Dec 2008) Presentations to various stakeholder groups</p>
<p><b>Stage 3</b> Policy Development</p>	<p>Heritage and Archaeology workshop for assessment of Heritage Features and objectives (Mar 2009) High Tide Roost and Compensation Habitats Workshop (Mar 2009) Planners Workshop (Mar 2009) Series of Key Stakeholder workshops (Mar 2009) Environment Group to discuss potential inter-tidal habitat creation opportunities and Appropriate Assessment methodology (Feb, Jun 2009) CSG meetings to discuss policy drivers, private landholdings and defences, and various assessments (Jan, Mar, May, Jun, Oct 2009) EMG meetings to discuss development and implications of policies (May, Jul 2009) Series of meetings with CSG members to confirm proposed policies (Oct 2009) Elected Members approve in principle to proceed to consultation (Sep - Nov 2009) Discussions and meetings with various landowners to discuss proposed policies Economic Assessment (May - Oct 2009)</p>

	Draft SMP and appendices produced (Apr 2009 - Dec 2010) Communications Group to coordinate consultation and media relation (Oct - Dec 2009)
<b>Stage 4</b> Public Examination	Discussions and meetings with various landowners to discuss proposed policies and the consultation process Public Consultation (Jan - Apr 2010)
<b>Stage 5</b> Finalise SMP	Consider all responses from the public examination of the Draft and agree revisions. Finalise SMP, Action Plan, and Appropriate, Strategic Environmental and Water Framework Directive Assessments. Adoption of final SMP by Operating Authorities
<b>Stage 6</b> Dissemination & Implementation	Disseminate final SMP and feedback to Stakeholders and Elected Members

**Table A2** Outline of SMP process

## **A4 STAGE 1 – SCOPE THE SMP**

### **A4.1 DEFINE SMP BOUNDARIES**

The SMP covers the coastline between Selsey Bill and Hurst Spit, including Southampton Water and Portsmouth, Langstone and Chichester Harbours. The area, therefore, encompasses coastal sub-cells 5a, 5b and 5c. The SMP extends inland to the tidal limits of rivers: Avon Water, Lymington, Beaulieu, Dark Water, Test, Itchen, Hamble, Meon, Alver, Wallington, Ems, Hermitage, Lavant.

### **A4.2 STAKEHOLDER ENGAGEMENT STRATEGY**

Representatives of groups with local, regional and national interests were identified in order to ensure that consideration was given to all with coastal interests in the North Solent area. 7 groups of representatives were formed:

Client Steering Group (CSG) – to provide technical expertise (see Table A1).

Elected Members Group (EMG) – to represent the public and comprising members of each of the Local Authorities and County Councils, Chichester Harbour Conservancy, New Forest National Park Authority and the Environment Agency Regional Flood Defence Committee. Representatives were chosen for their technical experience and local knowledge (see Appendix B).

The first meeting (May 07) nominated a Chairman, agreed a constitution and discussed issues identified as likely to arise during the process. 5 further meetings discussed feedback received about the issues, the technical reports and the proposed policies. The EMG provided feedback on the development of the SMP to the authorities they represented.

Key Stakeholder Group (KSG) – to represent groups with local, regional and national interests. The KSG included representatives of:

- Conservation bodies e.g. Hampshire and Isle of Wight Wildlife Trust, Sussex Wildlife Trust, RSPB
- Private landowners e.g. Beaulieu Estate, Cadland Estate, Cakeham Manor Estate
- Business, infrastructure and commercial organisations e.g. Hamble Oil, Esso Petroleum, Association British Ports Southampton, Queens Harbour Master (Portsmouth Harbour), Langstone Harbour Board, Hamble BP Oil Terminal, Lymington Harbour Commissioners, gas, sewage, water companies etc.
- Community and interest Groups e.g. Parish and Town Councils, Manhood Peninsula Partnership, Solent Protection Society
- Cultural and historic interests e.g. English Heritage, National Trust

Questionnaires were issued to the stakeholders to identify an appropriate representative together with relevant data, information and viewpoints of the individual / group represented. All data, information (including maps, booklets etc.) and comments in the returned questionnaires were collated, catalogued and stored in a database, for consideration during the assessments and appraisals.

Three Key Stakeholders Workshops were held at New Forest District Council Lymington Town Hall (20 Mar 2009), Havant Borough Council Civic Offices (23 Mar 2009) and at Eastleigh Borough Council Civic Offices (26 Mar 2009) to raise awareness of the SMP and its process. At each workshop the SMP process was explained along with work to date. Stakeholders and landowners raised their concerns regarding the implications and perception of the policy options, and the management of the shoreline and defences that are privately owned and maintained.

Appropriate Assessment Group – to provide specialist advice and expertise for development and preparation of the Appropriate Assessment.

Heritage and Archaeology Group – to provide cultural heritage expertise and advice, comprising representatives of:

- English Heritage
- Hampshire & Wight Trust for Maritime Archaeology
- Wessex Archaeology
- New Forest National Park Authority
- Local and county councils

Environment Group – to provide environmental expertise, at both local and regional scales, and to provide environmental and ecological advice. The Group also steered the Appropriate Assessment, and comprised representatives from:

- Natural England
- Isle of Wight SMP team
- Environment Agency (local, regional teams and the Habitat Creation Programme team)
- Hampshire Wildlife Trust
- RSPB
- Chichester Harbour Conservancy
- New Forest National Park Authority
- Local and county councils

Planners and Development Control Group – to provide planning expertise and advice.

At the start of the SMP, a website ([www.northsolentsmp.co.uk](http://www.northsolentsmp.co.uk)) was designed and used to distribute all supporting papers, minutes and draft documents, together with presentations given to the workshops and other meetings.

### A4.3 DATA COLLECTION

Data was collected via a number of sources including Local Authorities, CSG member organisations, stakeholders, literature searches, web-related searches and field observations. All the data and information gathered and used within the SMP development is referenced and recorded in Appendix I. Key resources included:

#### Base data

- Western Solent and Southampton Water SMP (1998)
- Eastern Solent and Harbours SMP (1997)
- Ordnance Survey data (Address Point)
- Environment Agency Indicative Floodplain, Flood Zone 3 [1 in 200 year] (2007)
- Partnership for Urban South Hampshire (PUSH) Flood Zone 3 [1 in 200 year] (2115)
- Pagham to East Head Coastal Defence Strategy Flood Zone 3 [1 in 200 year] (2108)
- Defence assessments and condition surveys and datasets
- National Flood and Coastal Defence Database (NFCDD)
- Nature conservation designation information
- Channel Coastal Observatory datasets e.g. aerial photography, lidar, topographic and bathymetric survey data, wave and tide data
- National Property database
- Futurecoast (2002)

#### Local and regionally specific data

- Solent Dynamic Coast Project
- Isle of Wight Mitigation Study
- SCOPAC Sediment Transport Study
- Pagham to East Head Coastal Defence Strategy (approved)
- Portsea Island Coastal Defence Strategy (approved)
- Other non-approved Coastal Defence Strategy, technical and coastal studies (e.g. draft Portchester to Emsworth CDS, draft River Itchen, Weston Shore, Netley and River Hamble CDS)
- Coastal Habitat Management Plans (CHaMPs)
- Information provided by stakeholders
- Site visits

## **A5 STAGE 2 - ASSESSMENTS TO SUPPORT POLICY DEVELOPMENTS**

### **A5.1 BASELINE UNDERSTANDING OF SHORELINE BEHAVIOUR AND DYNAMICS**

#### **A5.1a Assessment of Coastal Processes and Evolution**

A desk top baseline review of coastal processes was produced using existing data and geomorphological concepts. The baseline review includes statements on sediment budget and hydrodynamic interactions, historical coastal evolution and predictions of future shoreline evolution. It underpins the coastal process understanding of the study area and is the basis for the development of the baseline scenarios. Results are presented in Appendix C.

#### **A5.1b Assessment of Coastal Defences**

Data collated from Local Authority records and NFCDD included defence type, residual life, condition, and foreshore type. Records were validated in the field by representatives on the Client Steering Group and collated into a GIS-linked database. Natural flood defence features, such as saltmarshes, were also included and mapped since they are considered an important element in the Solent. The defence assessment information is collated and presented spatially in Appendix C.

### **A5.2 BASELINE SCENARIOS FOR COASTAL PROCESSES**

In order to assist in the development of future policy, future shoreline response was assessed assuming two scenarios. These are termed "baseline scenarios":

1. "No Active Intervention" (NAI) assumes that existing defences are no longer maintained and will fail over time (their residual life) or that undefended frontages will be allowed to evolve naturally.
2. "With Present Management" (WPM) assumes that all 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.

Following extensive review of monitoring and survey data, annual average rates of shoreline erosion were calculated under each scenario, which enable the shoreline position to be estimated and mapped, for the three epochs:

- Short-term (0-20 years)
- Medium-term (20-50 years)
- Long-term (50-100 years)

The mapping also shows estimated 'zones' of likely future shoreline erosion and the main areas at risk from coastal/tidal flooding, as denoted by the 1 in 200 year return period, flood risk area for 2108 (West Sussex) provided by the Environment Agency and Indicative Floodplain Map for 2115 (Hampshire), provided by PUSH.

The maps provide a visual indication of how the shoreline is likely to change, both spatially and temporally and have been used to review the outcome of the various assets and issues. Summary statements for both the "No Active Intervention" and "With Present Management" scenarios are detailed in Appendix C, outlining the main implications for each epoch. These assessments were presented to Key Stakeholders, Elected Members and the CSG.

### **A5.3 THEME REVIEW**

This is the baseline situation of all other information, which has 4 main groups (themes):

- Nature conservation
- Landscape
- Historic environment
- Current and future land use

Heritage data was assessed and prioritised by the Heritage & Archaeology Group at a Workshop on 4 Feb 2009. They considered and approved the proposed method for assessing and prioritising non-statutory and non-designated heritage features within the policy setting process. Key archaeological features were identified and prioritised according to risk of loss. Newly procured data from other stakeholders was also collated. Note that Rapid Coastal Zone Assessments may also produce new information but were not complete during development of SMP.

The outcomes of the workshop, including results and required actions under each policy option, are given in Appendix D.

### **A5.4 DEFINITION OF FEATURES, BENEFITS AND ISSUES**

This section aimed to identify the key features along the shoreline which are important to the stakeholders and the reasons for their importance *i.e.* the benefits that the feature provides in terms of nature conservation, landscape and character, human environment (including current and future land-use) and heritage. This information is collated with the other technical reviews and used as a basis for developing policy options and assessing the implications, and thus suitability, of the options.

A *Feature* is defined as something tangible that provides a benefit or service to society in one form or another. Examples of features include residential, community or commercial properties, industrial assets and facilities, a heritage



site, amenity or recreation areas and open space, sites of nature conservation or environmental importance.

Examples of **Benefits** are:

- biological value as part of a RAMSAR site
- contribution (of marinas) to local economy and employment
- registered archaeological site
- important recreational facility

An **Issue** is a matter of concern or point of interest which must be considered as part of the SMP development process. This may be where a feature is at risk from flooding or erosion or where management intervention could impact upon a feature. Examples of issues include:

- potential loss of housing
- potential for coastal defence works to impact upon an asset
- potential loss of environmentally important habitat e.g. high tide roost sites
- potential loss or damage to services, infrastructure and roads

Data and information on features and issues were collated from a wide variety of sources and where possible mapped in a GIS e.g. boundaries of environmental designations, location of heritage features. The full report and supporting maps are given in Appendix D.

In order to assess the features and issues raised by the baseline scenarios and theme review, the coastline was divided into a series of Policy Development Zones (PDZ), via consultation with the Client Steering Group. Definition of a PDZ was based around coastal processes and morphological change and similarity of broad features and issues. It should be noted, however, that the geographical boundaries of a PDZ may not represent the same boundaries as the Policy Units since this process assisted in the definition of the Policy Unit boundaries; in some instances a PDZ combines several Policy Units, or a Policy Unit may be a combination of several PDZs.

## **A5.5 ISSUES AND OBJECTIVES TABLE**

Following the baseline assessments, information from the Theme Review was taken forward and incorporated into an Issues Table which identified features and benefits for each PDZ. The Issues and Objectives Table is given in Appendix E, which clearly sets out:

- The feature
- Issues associated with the feature
- Why the feature is important *i.e.* the benefit/s provided
- Who the beneficiaries are
- Whether it affects policy

Note that although an issue may be deemed to be of flood and coastal defence relevance, it may not affect policy e.g. offshore dredging or offshore fisheries.

The Issues tables were distributed at the heritage and environmental stakeholder workshops, and to Elected Members and Client Steering Group for review and amendment, where necessary.

## A5.6 DEFINITION OF OBJECTIVES

The next stage was to use the features and issues to define objectives. Each feature & issue has an objective associated with it as shown in the example below:

Feature	Issues	Objective
Grade 2 agricultural land	potential loss of land and farm buildings	Prevent loss/reduce potential of agricultural land from flooding
	supply and demand for farm land for national food production	

These objectives fulfil two roles; firstly, they help inform the development of policy options and secondly, during the policy appraisal stage when the SMP policy scenarios are assessed against achievement of the objectives. They help provide a focus, therefore, for consensus amongst the SMP stakeholders on the various, sometimes conflicting, issues that have been raised during the process of SMP development. Details of the individual objectives are given in Appendix E.

## A5.7 IDENTIFICATION OF FLOOD AND EROSION RISKS

This stage was to determine whether a feature was at risk from coastal flooding and/or erosion. In order to do this, maps were produced of areas at risk of coastal flooding and/or erosion (as shown in Appendix C). If a feature fell within the area at risk then it was taken forward into the assessment process. Conversely, if a feature was not found to be at risk, it was not included in further assessments.

## A5.8 ASSESSMENT OF OBJECTIVES

The next stage was to prioritise and/or rank the objectives, based on answers to the following fundamental questions:

- At what scale is the benefit important *i.e.* local, regional, national, international?
- How important are the benefits to the people who use them?
- Is there enough of the benefit?
- Can the benefit be substituted *i.e.* replaced at an appropriate scale?

For those features and issues which are deemed to affect policy, the tangible benefits of the feature were identified, such as population and community, property, transportation, habitat and nature conservation importance, historical and landscape value, economic growth opportunities (ports, marinas, tourism, recreation, industry).

This information has been derived from the Theme Review and has involved the input of the Client Steering Group, Key Stakeholder Groups, Elected

Members Group, and consultation with the Planning, Heritage and Environmental Groups.

The revised SMP guidance (Defra, 2006) recognised that it is neither possible nor appropriate to compare different types of features e.g. environment site and housing. Therefore, a comparative ranking was generated specific to each theme *i.e.* housing and community facilities, commercial and agricultural property, infra-structure (roads, pipelines etc.), natural environment, heritage, landscape and recreation.

Significant effort was involved in defining a feasible and consistent approach to appraising the objectives in an objective, rather than a subjective, manner. To this end a ranking matrix was developed. The ranking criteria used for each theme was developed to maximize consistency when considering the various features identified by Stakeholders, Client Steering Group and Elected Members Group. The environmental theme ranking criteria were discussed at the Environment Group and agreed by Natural England and the Environment Agency. The heritage theme ranking criteria were agreed at a Heritage and Archaeological workshop attended by national, regional and local experts.

## **A6 STAGE 3 – POLICY DEVELOPMENT**

### **A6.1 DEFINITION OF POLICY SCENARIOS**

#### **A6.1a Identification of Key Policy Drivers**

A "key policy driver" was defined as a feature that has the potential to become an over-riding factor for determining policy due to its importance in terms of the benefits. It is helpful to note that, although in most cases a key policy driver will serve to promote or consider a policy option, it is possible that a key policy driver may serve to discard a policy.

There are no specific criteria which define a key policy driver; rather it is dependant upon the specific nature of the coastline and associated objectives and hence some subjective judgment is involved. Examples of key policy drivers are:

- International and European nature conservation designations (e.g. RAMSAR site, potential habitat creation opportunities)
- Nationally important infrastructure (e.g. Power Station, existing development)
- Regionally important transport links (e.g. Motorway)

Key policy drivers were identified primarily from the ranked objectives and by identifying their relative importance at each location. The key policy drivers also formed the basis for defining the policy options for each section of frontage, given in Appendix F.

During stakeholder engagement and consultations, third party ownership of landholdings and privately funded maintenance of defences were raised as very important factors which should be taken into account in determining policies. Landownership, for private, Local Authority, County Councils etc., was acknowledged as an important factor in determining final SMP policies, but could not be considered as a policy driver for determining the policies to be proposed at public consultation.

The CSG and Elected Members considered that the public consultation phase of the SMP was a key element in raising awareness of such issues as: coastal flooding and erosion risks; pressures on coastal environments and habitats; identifying potential opportunities for creating inter-tidal habitats to meet legal obligations; pressures on existing defences; the high proportion of the region's defences that were in private ownership or privately maintained and funded; and the consequences to owners and the wider public if defences were not maintained, particularly if privately funded and owned.

It should be noted that, although SMP policies are proposed for privately owned land and for privately maintained defences, both at the public

consultation and in the Final SMP, the rights of private owners to maintain their defences apply and remain.

The Solent is an environmentally important region with a wide diversity of vulnerable habitat types and species. Approximately 80% of the North Solent shoreline is covered by at least one, or more International or European level nature conservation designation. This results in a complex and unique combination of factors that need to be considered and taken into account when determining sustainable policies on a dynamic shoreline. Sites important for wildlife habitat often also have important amenity and landscape value.

Maintaining or improving the existing defences must comply with environmental legislation and objectives, including biodiversity targets set under the EU Habitats and Birds Directives, Ramsar Convention and DEFRA High Level Target 4 (DEFRA, 2006), in order to maintain favourable conservation status of the designated sites and a coherent network of coastal habitats.

A MR policy may be proposed for a number of reasons, such as flood storage capacity, economic viability (i.e. shorter lengths of secondary defences), or for environmental reasons to meet the legal obligation to maintain the extent of coastal wildlife habitat in the face of sea level rise, such as inter-tidal habitat creation for offsetting coastal squeeze.

### **A6.1b Identification of Potential Policy Options**

The next stage was to allocate a management policy to the coastline. To do this, the shoreline was sub-divided into a number of frontages, each of which can be considered discrete from adjacent frontages due to geomorphology or coastal processes and/or its pertinent features and issues. Each frontage is termed a Policy Unit. Each Policy Unit has three epochs attached to it: short-term (0-20 years), medium-term (20-50 years) and long-term (50-100 years).

A single SMP policy has been determined and applied per epoch for each Policy Unit, in order to achieve the aim of the SMP of determining an achievable long-term vision for the North Solent coastline. For example:

Policy Unit	Policy Option per Epoch		
	0 – 20 years	20-50 years	50-100 years
5C15 Calshot Spit	Hold the Line	Hold the Line	No Active Intervention

Each Policy Unit is supported with a statement on likelihood and source of funding, along with other necessary caveat or supporting statements.

The North Solent SMP recognises that there are private individuals and organisations that have rights or powers to protect their own property and to continue to maintain existing defences on a like-for-like basis without the need for planning permission, provided it does not constitute 'development' of any kind. Private landowners are encouraged to check with the local planning

authority whether the proposed works constitute 'development' or 'engineering works' in advance of any works commencing. Other consents may be required, as is currently the case.

## **A6.2 POLICY SCENARIO ASSESSMENT**

Having defined possible policies for future shoreline management, it was then necessary to appraise how the coast would evolve under these policy combinations, and the implications for the important features along the shoreline. This process had two main stages of assessment:

### **A6.2a Assessment of Shoreline Interactions and Response**

Drawing on the baseline review and the two baseline scenarios of "No Active Intervention" and "With Present Management", a series of statements were produced that documented shoreline interaction and response for the proposed policies to be tested, in each of the three epochs. Thus, linkages between frontages were considered both spatially and temporally. Defra's guidance on predicted sea level rise and potential climate change were built into the shoreline assessments, as were the SMP developed shoreline erosion risk mapping. Results are given in Appendix G Part 1.

The assessment considered the changes in the character of the frontage such as the creation of large realignment areas, in terms of their impact on the coastal processes and implications and their subsequent requirements on coastal defences and shoreline management. For example, if a policy of Hold the Line was being assessed, what implications are there for coastal processes in this unit and adjacent policy units? What are the consequences for existing defences? Would beach lowering cause the de-stabilisation of the defences, which may then require improvements and maintenance?

### **A6.2b Assessment of Achievement of Objectives**

Each of the features, issues, benefits and objectives defined in Appendix E (the Issues Table) were assessed against the proposed policies to see which policies fulfilled the objectives. This approach was extremely thorough and rigorous as it allowed the objectives to be assessed per issue, per location and per policy. In adopting this methodology, it was possible to identify which policy did or did not achieve the objectives. The policy that fulfilled the most individual and generic objectives (technical, economic and environmental) was then taken forward as the "objective-led policy".

Land ownership was not considered a key policy driver and therefore SMP policies were proposed on private landholdings. Results of the assessment are given in Appendix G Part 2.

### A6.3 ECONOMIC APPRAISAL

The Environment Agency is responsible for the approval and allocation of all coastal capital funding in England. Work or studies that are to be considered for funding schemes should be in line with the strategic direction set out in the SMP or strategy. In England they must also contribute to outcome measures and be on the Medium Term Plan sanctioned list .

The objective-led policy scenarios were then appraised to determine whether they were economically viable i.e. in broad terms, the economic robustness of the proposed policies for each of the proposed Policy Units.

The SMP guidelines and national cost-benefit criteria were applied to all objective-led policies. The baseline cost is considered to be the cost of "No Active Intervention"; this is used as the baseline against which the justification for doing something else is compared. Therefore, the costs of implementing the preferred policy e.g. Hold the Line, or Managed Realignment were offset against the No Active Intervention cost. The economic review determines, therefore, whether or not each policy is either:

- clearly economically viable
- clearly not economically viable
- of marginal viability

An assessment of "marginal viability" means that there may be a need of a more detailed assessment at a later date e.g. as part of a strategic plan or study, although some commentary on this is provided within this report.

Results of the economic appraisal are given in Appendix H. Alternative policy scenarios for a number of Policy Units were also considered through sensitivity testing, to highlight uncertainty or risks in key variables that may affect policy decisions e.g. change in environmental legislation, managed realignment options and changes in development. Costs for all options considered were developed. For example, a policy scenario of Hold the Line/Managed Realignment would be appraised in the sensitivity tests to make sure that it would not be more economically viable to have a Hold the Line/Managed Realignment policy scenario.

Due to the high proportion of private land ownership and private defences within the North Solent, it must be recognised that the justification for a particular policy is not necessarily dependant on national government economic viability criteria. Whilst improvement or maintenance works for a defence may not be deemed economically viable or be a sustainable use of public finances, using national government economic criterion, the private landowner may consider the identified works affordable and in their interest. Therefore, some HTL policies have been assigned, following consultation with landowners that have stated their intentions with regard to future maintenance and management of their defences, accompanied with a statement that no public funding would be available for such works, as is currently the case. For private defences, it is important to note the difference between economical



viability using national economic criteria and works that may be considered affordable by the landowner.

Economic criteria alone may not be the key driver determining the proposed policy, as impacts on other benefits may be considered more important e.g. although holding and maintaining existing defences to sustain a designated habitat would not be considered economically viable under current Treasury guidance, a policy of Hold the Line may still be proposed given the importance of the intangible benefits.

Each year Local Authorities apply to the Environment Agency for funding work through the Medium Term Plan. The costs and benefits of each potential project are assessed by the operating authority concerned (Environment Agency, Local Authority or internal drainage board) using a project appraisal methodology. The appraisal process results in the selection of a preferred risk management option for each location, in close consultation with interested parties including the local community. The Environment Agency then assesses the potential of each project to contribute towards achieving the outcome targets set for the current spending period in England.

In general, the Environment Agency allocates Government funding to those projects that deliver the greatest contribution towards the outcome targets for each £1 of investment, although in some cases funding is provided to meet legal requirements or to fund emergency works.

The budget for flood and coastal risk management is limited and therefore not all viable projects can go ahead. Where such a project is not successful in attracting Government funding it is because there are projects in other areas of the country that would deliver greater benefit, or contribute more towards the outcome targets, per £1 of investment. In such cases, Local Authorities and communities have the discretion to fund these projects themselves or request support from the RFDC local levy.

For some frontages within the North Solent area, Coastal Defence Strategies and schemes have been developed or are in preparation, in line with the recommendations and to address uncertainties identified in SMP1. While information has been incorporated as it becomes available, it is clearly not possible to include detailed information of concurrent studies that have not been completed at the time of developing this document. These studies have been able to consider the economic consequence for specific areas in far greater detail than would be appropriate for the second round SMPs.

It should be noted that further detailed economic analysis will need to be undertaken in justifying any specific scheme in line with principles set out in Defra's Flood and Coastal Defence Project Appraisal Guidance Note 3: Economic Appraisal (FCDPAG3).

## A6.4 CONFIRM PROPOSED POLICY SCENARIO

Changes in national advice or clarification of legislative interpretation resulted in some policy scenarios needing to be revised before they were confirmed for public consultation. Unfortunately, the original policies had been assessed and it was not possible within the time constraints of SMP delivery to re-assess in light of the amended advice. For frontages where a conflict of interest was identified *e.g.* privately owned landholdings, privately maintained defences, MOD sites, potential managed realignment for inter-tidal habitat creation, further discussion between the CSG and their Elected Members and review was required. Policies have therefore been proposed for each epoch of each Policy Unit, and have been supplemented with caveats and explanatory notes to indicate issues of uncertainty to be resolved through more detailed site-specific and strategic studies.

Only in extreme circumstances *i.e.* over-riding public interest, was another policy proposed instead of the objective-led policy. This occurred in relation to Ministry of Defence owned and maintained frontages. Where the MOD currently maintain their defences, the SMP assumed that the MOD will, for operational reasons, continue to maintain defences as long as they occupy that site.

In some locations this required the preliminary Policy Unit boundary limits to be re-evaluated. Suitability of the proposed policies was reviewed, therefore, not only by the objectives, but by the technical feasibility and economic justification. The proposed recommended policies, along with revisions to policy or Policy Unit were discussed with the Client Steering Group and Elected Members in order to finalise and confirm the policies to be formally proposed.

Following the objective assessment, the economic appraisal and taking into account the revised advice received, policies were determined for each Policy Unit, which would be presented for public consultation. These took the form of a summary table detailing the policies identified through the objective-led process, the economic viability and the justifications for the policies to be proposed for consultation.

## **A6.5 DRAFT SMP DOCUMENT PREPARATION**

A draft version of the main SMP was produced, presenting the Proposed Plan and the associated policies for review and consultation. It included:

- Details on the objectives of an SMP and its status
- A non-technical explanation, giving the background to development of the plan and discussing concepts of sustainability
- An overview of the preferred SMP and its implications
- Statements for each policy unit outlining
  - Details of the policies and their implementation
  - Justification for the policies
  - Flood and erosion risk mapping
  - Implications for local objectives
  - Landownership and shoreline responsibility mapping
- Draft Appropriate Assessment
- Draft Strategic Environmental Assessment
- Draft Water Framework Directive Assessment
- Planning Guidance Note to inform CSG, EMG and landowners on interpretation of SMP policies with regard to the planning process
- Supporting draft Appendices, including tidal flood risk and shoreline erosion risk mapping.

## **A7 STAGE 4 – PUBLIC EXAMINATION**

### **A7.1 GAIN APPROVAL IN PRINCIPLE TO PROCEED TO CONSULTATION**

Prior to a draft version of the SMP document being produced, the proposed policies together with policy justifications were presented to Elected Members by each Local Authority, for discussion and approval in principle to proceed to consultation. Each Local Authority confirmed their approval in principle to proceed to consultation with the proposed policies, with their feedback being minuted (Appendix B).

### **A7.2 CONFIRM CONSULTATION STRATEGY**

A Communications Group, with representatives from Local Authorities, Environment Agency and CSG was established to co-ordinate the strategy and delivery of the public consultation phase. It was agreed that the most effective approach was to utilise a number of existing media options. These included the North Solent SMP website, which has the draft SMP documentation, supporting appendices and assessments available to review and download. Consultation response forms were also available online. A summary leaflet condensing the SMP process and proposed policies was produced and made available at the exhibitions and online.

Stakeholders identified throughout the SMP development were contacted prior to the consultation period to inform them of the location of exhibitions, consultation process and method for viewing and commenting on the draft SMP. The draft SMP consultation and exhibitions were advertised via posters, Local Authority websites and the local press. Hard copies of the draft SMP and consultation forms were available at Local Authority offices and at Environment Agency offices, whilst summary documents were also available at public libraries.

A series of public exhibitions were held during the public consultation period, which detailed the draft SMP and the proposed policies. Additional presentations by Client Steering Group members were also available by Elected Members and Stakeholder Groups as required.

All consultation responses were collated and recorded in the Consultation Report, detailed in Appendix B.

## **A8 STAGES 5 AND 6 – REVISE AND FINALISE PLAN**

### **A8.1 DISSEMINATION**

Following the close of the consultation period, the Client Steering Group reviewed all feedback and appraised the need to make amendments to the SMP documentation and/or recommended policies. A Consultation Report was then produced, which summarised the feedback and how these issues were considered and actioned.

Once the final SMP had been produced following the necessary revisions, each Local Authority was responsible for its adoption. The Final SMP and the preferred policies were then presented to the Elected Members of each Local Authority for review, ahead of final document preparation.

Following adoption, the Client Steering Group was then involved in publicising the Final Plan and its recommendations, and implementing the policies by the appropriate authorities.

