First Review of Shoreline Management Plan Sub cell 3c

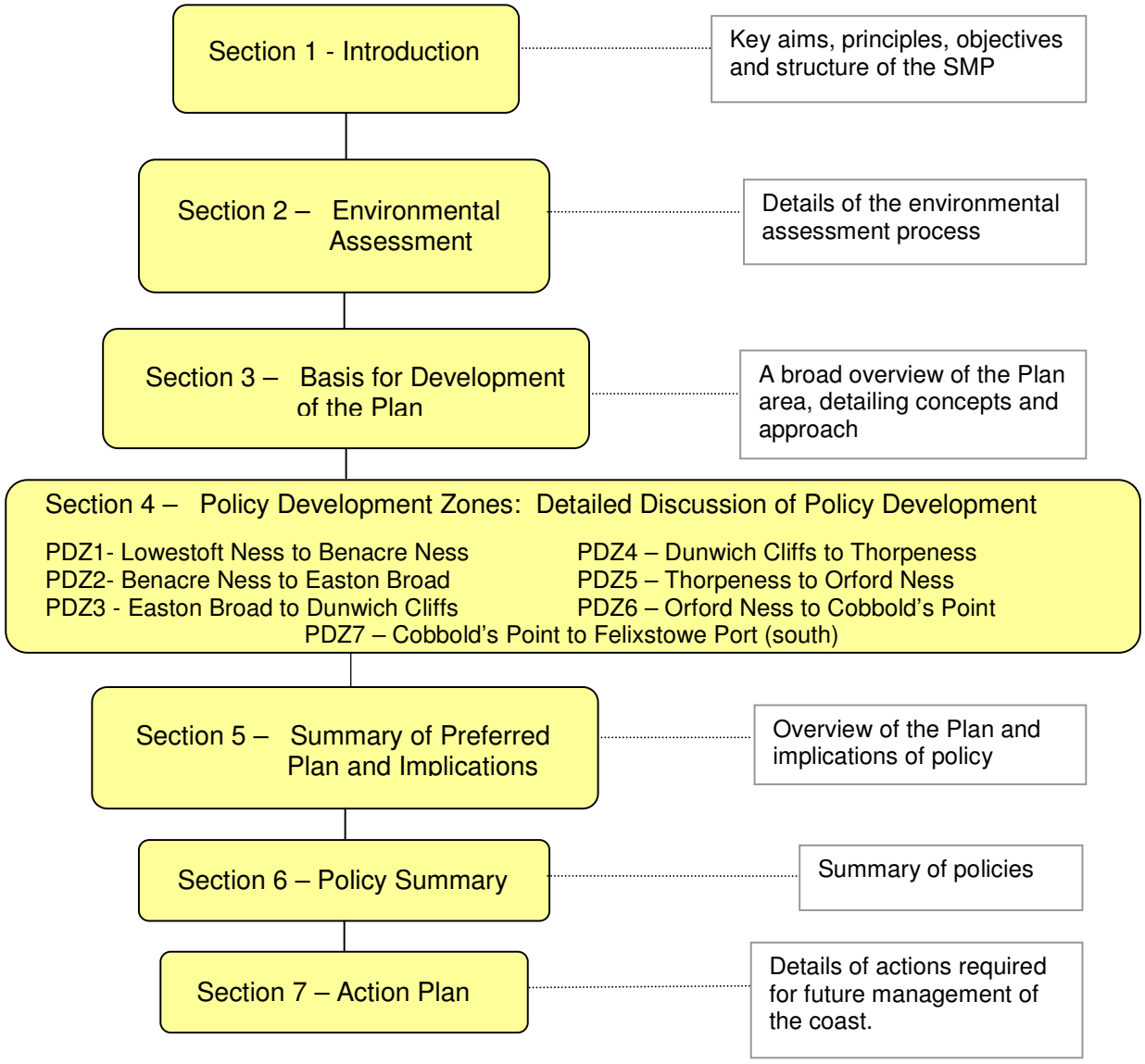
Lowestoft Ness to Landguard Point

Suffolk Coastal District Council

January 2010
Final Report

NAVIGATING THE SMP2 DOCUMENT

Main Report



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GLOSSARY OF TERMS

Term	Definition
AA	Appropriate Assessment. This is the process to support a decision made by the ' leading authority' as to whether the proposed plan or project would have an adverse effect on the integrity of any International site
AEP	Annual Exceedance Probability.
AONB	Area of Outstanding Natural Beauty: A statutory designation by the Countryside Commission. The purpose of the AONB designation is to identify areas of national importance and to promote the conservation and enhancement of natural beauty. This includes protecting its flora, fauna, geological and landscape features.
Adaptation	Implies that there may be some actual change in the way a feature, such as a habitat or a community, functions. In supporting adaptation, management has to recognise certain principles: • That adaptation may take time and may evolve slowly so that change to the overall community does not happen immediately. • That management should not encourage a progressively more vulnerable situation to develop, where there is a sudden change from one condition to another. • That specific aspects of a feature, such as individual properties or elements of habitat may change or be lost, but without substantial loss to the value of the community or the overall ecological function of feature.
Anthropogenic	The influence of human activity.
ATL	Advance the Line. To build new defences seaward of the existing defence line where significant land reclamation is considered.
Beach nourishment	Artificial process of replenishing a beach with material from another source.
Benefits (related to issue)	The service that a feature provides. In other words, why people value or use a feature. For example, a nature reserve, as well as helping to preserve biodiversity and meet national legislation, may also provide a recreation outlet much like a sports centre provides a recreation function.
Berm crest	Ridge of sand or gravel deposited by wave action on the shore just above the normal high water mark.
Biodiversity Action Plan	National action plans for an important habitat or species, approved by the Government, as part of the overall UK biodiversity action plan. (See the reference for the K Biodiversity Group, 1995 and 1999). Each action plan provides a description of species or habitat and any threats to it. It sets targets for recovery and lists the actions needed to meet these targets.
Brackish water	Freshwater mixed with seawater.
Breaker zone	Area in the sea where the waves break.
CSG	Client Steering Group. The project team driving the SMP review.
Coastal squeeze	The reduction in habitat area that can arise if the natural landward migration of a habitat under sea level rise is prevented by the fixing of the high water mark, e.g. a sea wall.
Defra	Department for Food, Environment and Rural Affairs
Defra Procedural Guidance	The Shoreline Management Plan (SMP) Procedural Guidance produced by Defra to provide a nationally consistent structure for the production of future generation Shoreline Management Plans.
Downdrift	Direction of longshore movement of beach materials.
Ebb-tide	The falling tide, part of the tidal cycle between high water and the next low water.
Ecosystem	Organisation of the biological community and the physical environment in a

Term	Definition
	specific geographical area.
Enhance (improve)	The value of a feature increases.
Environmental impact assessment	Detailed studies that predict the effects of a development project on the environment. They also provide plans for mitigation of any significant adverse impacts.
Epoch	This refers to a period of time. The SMPs three epochs are defined - 0 to 20, 20 to 50 and 50 to 100 years from present. These periods are indicative.
Erosion	The wearing away of land or movement of sediment away from a section of coast due to coastal energy.
ESA	Environmentally Sensitive Area. A non-statutory designation for an area where special land management payments are available through agreement with Defra to provide farming practices which are beneficial to the environment.
Feature	Something tangible that provides a service to society in one form or another or, more simply, benefits certain aspects of society by its very existence. Usually this will be of a specific geographical location and specific to the SMP.
Fetch	Area of water where waves are generated by the wind.
Flood-tide	Rising tide, part of the tidal cycle between low water and the next high water.
Fluvial Flooding	Areas at risk from flooding due to fresh water flow from a river.
Foreshore	Zone between the high water and low water marks.
FRM	Flood Risk Management.
Geomorphology/ Morphology	The branch of physical geography/geology which deals with the form of the Earth, the general configuration of its surface, the distribution of the land, water, etc.
Groyne	Shore protection structure built perpendicular to the shore; designed to trap sediment.
HAT	Highest Astronomical Tide: The highest level that can be expected to occur under average meteorological conditions and under any combination of astronomical conditions.
HTL	Hold the Line. Maintain or upgrade the level of protection provided by defences or natural coastline
Heritage Asset	A building, monument, site or landscape of historic, archaeological, architectural or artistic interest whether designated or not. Designated assets may be World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Registered Park or Gardens, Registered Battlefields and Conservation Areas.
Heritage Coast	A non-statutory designation by the Countryside Commission for coasts of scenic quality, their largely undeveloped nature and their special wildlife and historic interest. Local authorities assist with the management of Heritage Coasts often with Heritage Coast officers.
Historic Environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and deliberately planted or managed flora.
IFM	Indicative Flood Mapping.
Integrated	An approach that tries to take all issues and interests into account. In taking this approach, managing one issue adds value to the way another is dealt with.
LAT	Lowest Astronomical Tide. The lowest level that can be expected to occur under average meteorological conditions and under any combination of astronomical conditions.
LNR	Local Nature Reserves. A statutory designation for sites established by local authorities in consultation with Natural England (formerly English Nature). These

Term	Definition
	sites are generally of local significance and also provide important opportunities for public enjoyment, recreation and interpretation.
Maintain	That the value of a feature is not allowed to deteriorate.
Management Area (MA)	A collection of Policy Units that are interdependent and should therefore be managed collectively.
MDSF	Modelling and Decision Support Framework. Mapping linked computer tool used in the evaluation of assets at risk from flooding or erosion.
Mean sea level	Average height of the sea surface over a 19-year period.
MHW MHWS MHWN	Mean High Water. The average of all high waters observed over a sufficiently long period. The tide levels will vary on the type of tide, ie. Spring or Neap tides.
Mitigation	Practical measures taken to offset the impact of a policy upon physical assets. For the historic environment, this may be 'preservation by investigation' for archaeological features, or 'preservation by recording' followed by staged abandonment, demolition or re-location for listed buildings. There is no effective mitigation for the loss of historic landscapes.
MLW MLWS MLWN	Mean Low Water. The average of all low waters observed over a sufficiently long period. The tide levels will vary on the type of tide, ie. Spring or Neap tides.
MR	Managed Realignment. To manage the coastal processes to realign the 'natural' coastline configuration, either seaward or landward of its present position.
NAI	No Active Intervention. a decision not to invest in providing or maintaining defences or natural coastline.
NNR	National Nature Reserves. A statutory designation by Natural England (formerly English Nature). These represent some of the most important natural and semi-natural ecosystems in Great Britain and are managed to protect the conservation value of the habitats that occur on these sites.
Objective	A desired state to be achieved in the future. An objective is set, through consultation with key parties, to encourage the resolution of the issue or range of issues.
Offshore zone	Extends from the low water mark to a water depth of about 15 m (49 ft) and is permanently covered with water.
Policy	In this context, "policy" refers to the generic shoreline management options (No Active Intervention, Hold the Existing Line of Defence, Managed Realignment, Retreat or Advance the Existing Line of Defence, and Hold the Retired Line).
Policy Development Zone (PDZ)	A length of coastline defined for the purpose of assessing all issues and interactions to examine and develop management scenarios. These zones are only used in the procedure of developing policy. Policy Units and Management Areas are then used for the Final definition of the policies and the management of the coast.
Policy Scenario	A combination of policies selected against the various feature/benefit objectives for the whole SMP frontage.
Policy Units	Sections of coastline for which a certain coastal defence management policy has been defined. These are then grouped into Management Areas for management purposes.
PV	Present Value. The value of a stream of benefits or costs when discounted back to the present day. For this SMP the discount factors used are the latest provided

Term	Definition
	by Defra for assessment of schemes, i.e. 3.5% for years 0-30, 3.0% for years 31-75, and 2.5% thereafter.
Ramsar	Designated under the, "Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat." 1971. The objective of this designation is to prevent the progressive encroachment into, and the loss of wetlands.
RFDC	Regional Flood Defence Committee
RIGS	Regionally Important Geological/Geomorphological Sites. A non-statutory designation identified by locally developed criteria and are currently the most important places for geology and geomorphology outside statutorily protected land such as SSSI's. This is.
RMF	Represented Members Forum.
SAC	Special Area of Conservation. This designation aims to protect habitats or species of European importance and can include Marine Areas. SACs are designated under the EC Habitats Directive (92/43EEC) and will form part of the Natura 2000 site network. All SACs sites are also protect as SSSI, except those in the marine environment below the Mean Low Water (MLW).
SAM	Scheduled Ancient Monuments. A statutory designation under the Ancient Monuments and Archaeological Areas Act 1979. This Act, building on legislation dating back to 1882, provides for nationally important archaeological sites to be statutorily protected as Scheduled Ancient Monuments.
SEA	Strategic Environmental Assessment. A systematic appraisal of the potential environmental consequences of high-level decision-making.
Setback	Prescribed distance landward of a coastal feature (e.g. the line of existing defences).
SLA	Special Landscape Area. A non-statutory designation for an area usually identified by local authorities as having a strategic landscape importance.
SMA	Sensitive Marine Area. A non-statutory designation for nationally important locations around the coast that require a cautious and detailed approach to management. They are identified by Natural England (formerly English Nature) for their important benthic populations, spawning or nursery areas for fish, fragile intertidal communities, or breeding, feeding, and roosting areas for birds and sea mammals.
SMP	Shoreline Management Plan. A non-statutory plan, which provides a large-scale assessment of the risks associated with coastal processes and presents a policy framework to reduce these risks to people and the developed, historic and natural environment in a sustainable manner.
SNCI	Site of Nature Conservation Importance. A non-statutory designation defined by the Wildlife Trusts and Local Authorities as sites of local nature conservation interest. These form an integral part in the development of planning policies relating to nature conservations issues.
SPA	Special Protection Area. A statutory designation for internationally important sites, being set up to establish a network of protected areas of birds.
SSSI	Sites of Special Scientific Interest. A statutory designation notified by Natural England (formerly English Nature), representing some of the best examples of Britain's natural features including flora, fauna, and geology.
Storm surge	A rise in the sea surface on an open coast, resulting from a storm.
Sustain	Refers to some function of a feature. A feature may change, but the function is not allowed to fail.

Term	Definition
Swell	Waves that have travelled out of the area in which they were generated.
Tidal Flooding	Areas at risk from flooding due to tidal or surge levels of the sea.
Tidal prism	The volume of water within the estuary between the level of high and low tide, typically taken for mean spring tides.
Tide	Periodic rising and falling of large bodies of water resulting from the gravitational attraction of the moon and sun acting on the rotating earth.
TOAL	Terry Oakes Associates Ltd.
Topography	Configuration of a surface including its relief and the position of its natural and man-made features.
Transgression	The landward movement of the shoreline in response to a rise in relative sea level.
Updrift	Direction opposite to the predominant movement of longshore transport.
VMCA	Voluntary Marine Conservation Areas. A statutory designation to protect the marine conservation importance of a site and to provide a focus for liaison, co-operation and education for a sustainable marine environment.
Water table	The upper surface of groundwater; below this level, the soil is saturated with water.
WFD	Water Framework Directive.
Wave direction	Direction from which a wave approaches.
Wave refraction	Process by which the direction of approach of a wave changes as it moves into shallow water.
WPM	With Present Management. This assumes that policies from SMP1 or subsequent strategies apply.

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ABPMer prepared the Estuary Assessment (refer Appendix I).

Royal Haskoning acknowledges the work undertaken through Futurecoast and Southern North Sea Sediment Transport Study, contents from which has been used in preparing Appendix C.

CONTENTS

1 INTRODUCTION

1.1 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. In doing so, an SMP is a high-level document that forms an important part of the Department for Environment, Food and Rural Affairs (Defra) strategy for flood and coastal defence (Defra, 2001). The plan provides both a broad scale assessment of these risks but also quite specific advice to operating authorities in their management of defences. Through this and through the identification of issues covering a wide spectrum of coastal interests, the SMP supports the Government's aims, as set out in Defra's strategy "Making Space for Water" (Defra 2005):

- To reduce the threat of flooding and coastal erosion to people and their property; and
- To deliver the greatest environmental, social and economic benefit, consistent with the Government's sustainable development principles.

This SMP2 document, developed on behalf of Suffolk Coastal District Council and supporting steering group, sets out the results of the first revision to the original Shoreline Management Plans for the area of coast extending from Lowestoft Ness to Landguard Point. This SMP2 collates information from the original SMP for sub-cells 3c and subsequent strategies and studies.

1.1.1 Principles

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. However, from this perspective, it aims to provide the context to, and consequence of management decisions in other sectors of coastal management.

The SMP promotes management policies for a coastline into the 22nd Century that achieve long-term objectives without committing to unsustainable defence. It is, however, recognised that due to present day objectives and acceptance, wholesale changes to existing management practices may not be appropriate in the very short-term. Consequently, the SMP provides a timeline for objectives, policy and management changes; i.e. a 'route map' for decision makers to move from the present situation towards the future.

The first SMP for this area was completed in 1998 working from north to south along the coast. Since that time more detailed strategy studies have

been undertaken over large sections of the coastline and these, together with academic research and monitoring by the responsible authorities, have improved our understanding of how the coast behaves. In addition many lessons have been learnt with respect to how the SMP should be conducted and indeed how we should be viewing the management of the shoreline. Defra (2001, 2003) undertook a review of the results from SMP1, considering their strengths and weaknesses. This has led to revised guidance. Some of this guidance is targeted at achieving greater consistency in the assessments and presentation of the plans, but there are more fundamental issues that have been identified, which this and other SMP2s must address.

One significant issue is the inappropriateness of certain policies which, when tested in more detail with a view to being implemented, may be found to be unacceptable or impossible to justify; either in terms of economics or from a perspective of what communities need from the coast. It is, therefore, important that the SMP must be realistic given known legislation and constraints; not promising what cannot be delivered but neither delivering in the broader perspective that which fails against the values of the coastal zone. There will be no value in a long-term plan which has policies that are driven by short-term politics or works that prove to be to the detriment of the area when considered several years in the future.

Equally, the plan must also remain flexible enough to adapt to changes in legislation, politics and social attitudes. The plan, therefore, considers objectives, policy setting and management requirements for 3 main epochs; from the present day, medium-term and long-term. These correspond broadly to time periods of 0 to 20 years, 20 to 50 years and 50 to 100 years respectively. There is a need to have a long-term sustainable vision, which may change with time, but should be used to demonstrate that management decisions made today are not detrimental to achievement of that vision.

The plan covers an area both of significant environmental value, but also having a strong history of human settlement and present use. These uses and interests are not inherently opposed. In reality it is the natural attraction combined with the historic coastal use which gives this area of the coast its distinct and considerable value to man in the present day. While individual core objectives or aims may be set, with respect to each specific aspect of the area, the aim of the SMP2 must be to develop policy where, as far as possible, these specific objectives are not conflicting. The underlying principle for the development of the plan has been to consider the specific circumstance of the differing sections of the coast and through this understanding, attempt to deliver greatest benefit to the totality of coastal communities in an area.

1.1.2 SMP Process Objectives

The objectives of the SMP process (as distinct from the objectives for management of the coast) are as follows:

- To provide an understanding of the coast, its behaviour and its values.
- To define, in general terms, the risks to people and to the developed, natural and historic environment within the SMP area over the next century.
- To identify the likely consequence of different management approaches and from this;
- To identify the preferred policies for managing those risks or creating opportunity for sustainable management.
- To examine the consequences of implementing the preferred policies in terms of the objectives for management.
- To set out procedures for monitoring the effectiveness of the SMP policies.
- To inform others so that future land use and development of the shoreline can take due account of the risks and preferred SMP policies.
- To comply with international and national nature conservation legislation and biodiversity obligations.

1.1.3 Key Principles

The following list of principles reflects the aspirations all stakeholders. It will be used together with stakeholder objectives identified for each area of the coast and will aid policy development and to identify specific objectives. These objectives have been developed by consulting the Client Steering Group (CSG), Representative Members Forum (RMF) and key and other stakeholders, and are presented as aggregated objectives for each area. It is important to note that these come from the values that stakeholders place on the issues and features in each area. Some of these objectives will therefore conflict with others. Because of this, the SMP will not be able to achieve all of these objectives. A discussion of the objectives and the principles given below is presented in Appendix B, setting out key values for the area. It should be noted that these principles have been set out in no particular order.

- To avoid the loss of life through flooding;
- To protect people's homes from flooding and erosion;
- To protect the local economy;
- To contribute to a sustainable and integrated approach to land use planning;
- To support adaptation by the local coastal communities;
- To avoid damage to and enhance the natural heritage;
- To support the historic environment and cultural heritage where economically, technically and environmentally sustainable.
- To maintain or improve landscape designations and features; and
- To reduce reliance on defence.

1.1.4 Policies

The generic shoreline management policies considered are those defined by Defra; they are represented by the statements:

- **No active intervention (NAI)**: a decision not to invest in providing or maintaining defences or natural coastline.

- **Hold the line (HTL)**: maintain or upgrade the level of protection provided by defences or natural coastline.

- **Managed realignment (MR):** manage the coastal processes to realign the 'natural' coastline configuration, either seaward or landward of its present position.

- **Advance the line (ATL)**: build new defences seaward of the existing defence line where significant land reclamation is considered.

Further clarifying these policies the following additional information is provided.

No Active Intervention
The policy of No Active Intervention arising from two distinct set of circumstances. In the first, the SMP has identified that need for the coast to be allowed to develop naturally. Typically, it may be that erosion of a frontage is providing sediment to other sections of the coast. It may, therefore, be important that the coast is allowed to continue to erode if sustainable intervention is to be achieved elsewhere. Where this or some similar condition applies, this is discussed in the SMP. The other situation where the policy of No Active Intervention is defined, it may arise from that fact that it is unlikely that operating authorities would provide funding for managing the coast. This may be that works may have a cost/benefit ratio less than one, or where there may not be priority funding. Where appropriate, the SMP introduces caveats to make this distinction. The SMP has identified that privately funded works may still be permissible, however, there may be conditions associated with this such that private works do not result in negative impacts on other interests.

Hold the Line
The intent of the policy is to maintain defence to important assets or interests at the coast. This does not necessary mean that the existing defences would be maintained in exactly the same form as they are at present. There may be a need to adjust the local alignment in the future or to replace or add to structures. In this way, constructing cross shore or shore linked structures, such as groynes or breakwaters, may be the approach adopted in the future under this policy in specific cases. The proposed policy therefore sets the intent to maintain defence of the important features in an appropriate

manner. In areas where Hold The Line has been recommended, it is possible that funding may not be forthcoming from the Flood and Coastal Erosion Risk Management (FCERM) budget. The SMP has highlighted this and also identified what additional opportunities and benefits may be gained from a HTL policy. Caveats are made in these circumstances highlighting the need for collaborative funding to achieve the proposed management plan.

Managed Realignment

The policy of managed realignment may also arise from a series of different circumstances. The overall idea is, however, that management of the shoreline would be improved by either allowing or creating the conditions for the coast to realign. A very obvious example of this is in moving linear flood defence back from the active coastal zone, providing a more secure position for such a defence while also allowing the shoreline to adjust. Other examples are where intervention at the coast may be less onerous if the coast is allowed to retreat before intervention is undertaken. This may, for example, create the opportunity to retain a beach in front of a set back hard defence. A further example of managed realignment is in considering how adjacent policy units function together. It may be that the situation in one policy unit the policy is to hold the line and that in doing this, the coast in an adjacent unit is allowed to function more naturally. In summary, managed realignment is used where there is a need for continued intervention either locally or more remotely, so as to achieve a specific outcome.

This defines the level of detail required by the plan. However, in developing these generic policies there is also a basic requirement to state the intent of the policy such that it is the intent, not the definitions given above, that drive future management.

1.2 Structure of the SMP

The preferred plan and policies presented in this SMP are the result of collating information from numerous studies and the assessments of how the coast may perform. There is, therefore, a need to draw these threads together to provide clarity for different readerships. To this end, the documentation to communicate and support the plan is provided in a number of parts. At the broadest level these are divided into two; the Shoreline Management Plan itself, and a series of supporting Appendices. In addition, information is collated in a database linked to a geographical information system (GIS), allowing information to be taken forward in implementing the plan.

1.2.1 Shoreline Management Plan Report Structure

This draft document provides the plan for the future and the policies required for this plan to be implemented. This is intended for general readership and is the main tool for communicating the intention of future management.

Whilst the justification for decisions is presented, it does not provide all of the information behind the recommendations, this being contained in other documents. The plan is presented in seven parts:

Section 1 Gives details on the principles, aims, structure and background to the development of the plan.

Section 2 Provides details of how the SMP meets the requirements of an Appropriate Assessment (AA) and Strategic Environmental Assessment (SEA).

Section 3 Presents the basis for development of the Plan, providing a broad overview of the Plan area, describing the concepts of sustainable policy and providing an understanding of the constraints and limitations on adopting certain policies.

Section 4 It has been frequently stated that there is as much value in the thought process of developing the SMP as there is in the actual policies themselves. This section, therefore, aims to lead the reader through this process. The section starts with a discussion of large segments of the coast (called Policy Development Zones; PDZ). Within these zones the coast is described and the way in which the coast might behave is explained under two scenarios:

- if no further defence work was undertaken, (The No Active Intervention scenario)
- if present management is continued into the future (The With Present Management scenario).

These are defined as the two baseline scenarios in undertaking the review. Consideration of these scenarios develops an understanding of the pressures which may develop on the coast under different approaches to management. It allows an assessment to be made of whether, under each scenario, objectives are or are not achieved.

From this assessment alternative approaches or scenarios are examined and from this the preferred draft Plan is developed. To achieve this Plan individual policies for sections of the coast are derived (Policy Units; PU). These units are finally grouped in to areas of management (Management Areas; MA), pulling together policy units which have a basic interdependency.

For each Management Area statements are prepared setting out a summary of the intent, the necessary actions over different time scales, and the impacts of the preferred policies. Starting from an initial 7 Policy Development Zones, the coast is defined

by 66 Policy Units which are drawn together as 20 Management Areas.

Section 5 Brings together the overall plan, highlighting important issues in relation to the future management of the coast.

Section 6 Provides a brief summary of policies. It is appreciated that many readers will focus upon the local conclusions of the SMP. However, it is important to recognise that the SMP is produced for the coast as a whole, considering issues beyond specific locations. Therefore, this summary should be read in the context of the wider-scale issues and policy implications, as reported and developed in Section 4 and supported by information in the Appendices.

Section 7 An action plan has been developed, providing a programme for future activities which are required to progress the Plan between now and its next review in 5 to 10 years time. A summary of this action plan for each Management Area will be presented in Section 7.

1.2.2 The Supporting Appendices

The accompanying documents provide all of the information required to support the plan. This is to ensure that there is clarity in the decision-making process and that the rationale behind the policies being promoted is both transparent and auditable. This information is largely of a technical nature and is provided in ten Appendices:

A. SMP Development: This reports the history of development of the SMP, describing more fully the plan and policy decision-making process.
B. Stakeholder Engagement: Details of the stakeholder involvement process are provided here, together with information arising from the consultation process.
C. Baseline Process Understanding: Includes baseline process report, defence assessment, No Active Intervention (NAI) and With Present Management (WPM) assessments and summarises data used in assessments.
D. Natural and Built Environment Baseline (Thematic Review): This report identifies the environmental features (human, natural, historical and landscape) in terms of their significance and how these need to be accommodated by the SMP.
E. Issues and Objective Evaluation: Provides information on the issues and objectives identified as part of the Plan development, including appraisal of their importance.
F. Strategic Environmental Assessment (SEA): Provides a systematic appraisal of the potential environmental consequences of high-level decision-making.

G. Scenario Testing: Presents the policy assessment and appraisal of objective achievement for the No Active Intervention scenario and the Preferred Plan.
H. Economic Appraisal: Presents the economic analysis undertaken in support of the Preferred Plan
I. Estuary Assessment: Examines the need or extent to which estuaries are included within the SMP2 process. Provides a record of the bibliographic and metadata information.
J. Sets out the support information for an Appropriate Assessment of the Shoreline Management Plan.
K. The Metadatabase, GIS and Bibliographic Database is provided to the operating authorities on CD.
L. Water Framework Directive Assessment; provides an assessment of SMP policy to ensure that the plan complies with the requirements of the directive.

1.2.3 GIS and Databases

The SMP2 provides a future management framework. It is accepted that our understanding of the coast can be improved, addressing the many areas of uncertainty that we are presently confronted with. There will also be changing circumstance not only as the coast evolves but as our use of the coast changes. During the development of the SMP, information on issues, on processes and our assumptions with respect to different aspects, such as the condition of defences or erosion rates, have been recorded.

This information is held within databases linked through to a Geographical Information System (GIS). This system is provided in association with the actual plan so that, as new information emerges, this may be used to update the management system. The intent is two-fold. First, that information is recorded and may be compared with our existing knowledge such that better informed management decisions can be made as management of the coast continues. Secondly, that at such a time that the SMP requires review, hard won information is readily available to this review process.

One important feature of this information is in the responses and issues which were raised during the consultation process. This data is recorded in the issues, features and objective database used for developing and appraising policy. Management of this information will help those managing the coast in the future to identify issues at a local scale, ensuring that views can be readily identified during the actual implementation of the Plan. The degree of effort all consulted have put in to developing the Plan is fully appreciated. The storage of issues information should help ensure that people's concerns are recognised in the future.

1.3 The Plan Development Process

1.3.1 The Need for Revision

The original SMP1 for sub-cell 3c was completed during 1998. It has always been recognised that part of the shoreline management plan process is that plans should be reviewed on a regular basis. The review undertaken through SMP2 has been part of this process.

Very much initiated by the findings of the SMP1, a considerable effort has been put in place over the last three years to ensure that we have been in a better position to make judgements with respect to the coast. There have also been changes in legislation and guidance. In this first revision, therefore, the development of the Plan has been able to draw upon and has had to take account of:

- Latest studies and modelling undertaken since the last SMP such as that provided by Futurecoast.
- Issues identified by most recent defence planning (i.e. the several coastal defence strategy plans which have now been produced to cover most of the SMP area between Lowestoft Ness to Landguard Point.
- Changes in legislation (e.g. the EU Directives, guidance with respect to the Water Framework Directive).
- Changes in national flood and coastal defence planning requirements (e.g. the need to consider 100 year timescales in future planning, modifications to economic evaluation criteria etc.).
- The emerging thinking on Integrated Coastal Zone Management.

The period between the development of SMP1 and SMP2 has, therefore, been one of quite rapid change. With the manner in which the SMP2 has now been organised and the further understanding that has been developed, shoreline management has to be seen as an ongoing process providing a platform for more local decision making. It is anticipated that subsequent reviews may be undertaken in 10 years time. This timescale would ultimately be driven by the scale in change on the coast itself.

1.3.2 Review and Development Procedure

Since the production of SMP1, the East Anglian Coastal Group (EACG) has always been a broadly based body acting to co-ordinate management of the coast. This group comprises representatives from local and national authorities that lie within Coastal Cell 3, from The Wash to the Thames Estuary. To aid management of this coastline, Coastal Cell 3 has been broken down to form sub cells. Each sub cell has been assigned a steering group to manage and co-ordinate the SMP2 process. This SMP covers the sub cell 3c from Lowestoft Ness to Landguard Point. Figure 1.1 identifies the neighbouring high level plans to the Suffolk SMP which have been integrated into the decision making process.

The Client Steering Group (CSG) for this sub cell comprises representatives from Suffolk Coastal District Council (SCDC) (Lead Authority), Waveney District Council (WDC), the Environment Agency (EA), Suffolk County Council (SCC) and Natural England (NE). Together with Royal Haskoning, the CSG have managed the necessary stages of the SMP2 process to produce this management plan. Figure 1.2 illustrates the division of management responsibilities along the Suffolk coast.

The SMP development process has sought involvement from over 150 organisations or individuals, with principal periods of consultation being conducted during September 2007 and March/April 2009, with consultation on the draft Plan being undertaken over the period between July and September 2009.

The main activities in producing the SMP have been:

- development and analysis of issues and objectives for various locations, assets and themes;
- thematic reviews, reporting upon human, historic and natural environmental features and issues, evaluating these to determine relative values of the coast;
- analysis of coastal processes and coastal evolution for baseline cases of not defending and continuing to defend as at present;
- agreement of objectives with the CSG, RMF and through public consultation, and from this determining possible policy scenarios;
- development of policy scenarios which consider different approaches to future shoreline management;
- examination of the coastal evolution in response to these scenarios and assessment of the implications for the human, historic and natural environment;
- determination of the preferred plan and policies through review with the CSG, prior to compiling the SMP draft document.

This will be followed by:

- consultation on the proposed plan and policies;
- consideration of responses and finalising the SMP;
- dissemination of the findings and policy contained within the Plan.

Figure 1.1: High level plans surrounding the Suffolk SMP

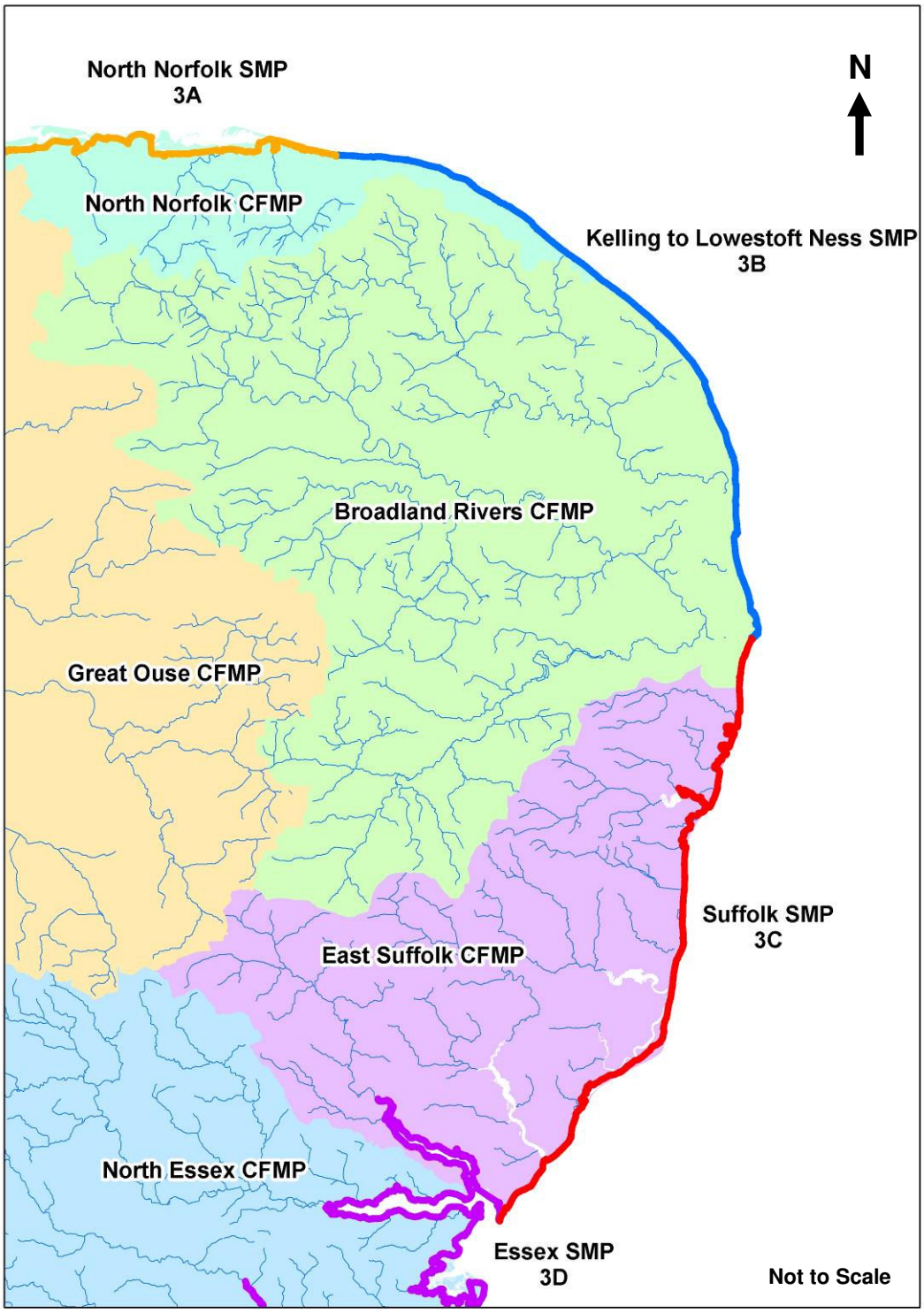

Figure 1.2: Management responsibilities for the Suffolk coast