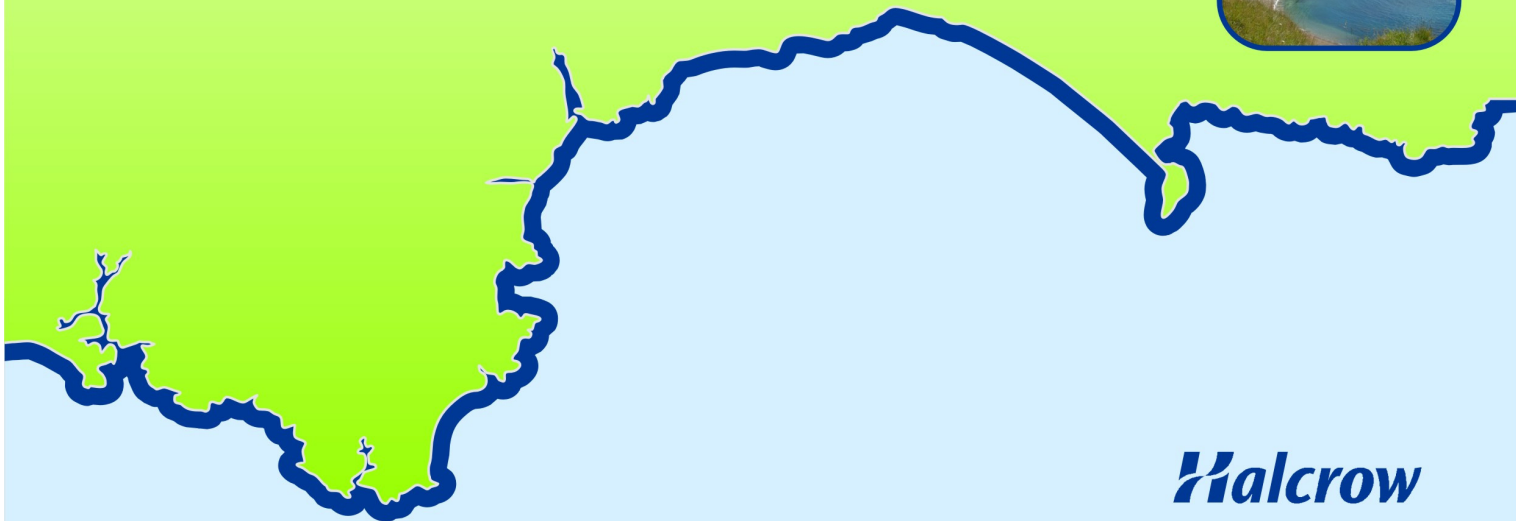


South Devon and Dorset Coastal Advisory Group (SDADCAG)

Shoreline Management Plan SMP2 Durlston Head to Rame Head

Non-Technical Summary
December 2010



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I. Non-technical Summary

I.1 Introduction

The South Devon and Dorset Coastal Advisory Group (SDADCAG) is developing a long-term plan to set out the future management of the coastline from Durlston Head in Dorset to Rame Head in Cornwall – the Durlston Head to Rame Head Shoreline Management Plan (SMP) 2. This SMP is a plan that identifies policies over a 100 year timescale to manage tidal flooding and coastal erosion risks in the plan area (Figure I.1).

Figure I.1 South Devon and Dorset SMP area



The plan includes a Strategic Environmental Assessment (SEA) to ensure that the recommendations of the final plan are environmentally appropriate and potential opportunities for enhancement are identified. SEA is the appraisal of the potential environmental consequences of high level decision-making, to help protect the environment and to help ensure environmental considerations are integrated into the preparation and adoption of plans and programmes.

This document is a non-technical summary of the SEA process for the Durlston Head to Rame Head SMP2. This summary describes the background and purpose of both the SEA and the SMP and sets out the recommended strategic management options for the coastline. The SEA Report describes the environmental characteristics of the plan area and identifies a set of proposed environmental objectives for the study based on the identified key environmental issues.

1.2 Baseline Environment

The current state of the environment is described in a report called 'SEA Environmental Baseline 'Theme Review', which is appended to the main SMP. The key environmental issues identified within the Theme Review are summarised below:

- **Flora, Fauna and Biodiversity** – the importance of the plan area for wildlife is reflected in the designation of international, national and local nature conservation sites. The study area supports a variety of habitats including sea cliffs, mudflats, saltmarsh, estuaries, sand dunes, shingle bars, beaches, reed beds, marshland, woodland, heathland, grassland and lagoons. Opportunities exist to create intertidal and wetland habitat in low-lying parts of the study area.
- **Soils and Geology** – The coastline is of considerable geological importance, and is designated at an international, national and local level for its earth heritage value. A large part of the SMP area lies within the Jurassic Coast World Heritage Site (WHS) and continued erosion is key to maintaining its outstanding universal value, exposing rock sequences and releasing fossils to the beach. The geomorphology of the SMP area is varied and includes shingle banks, beaches, sand dunes and salt marshes. Potential areas of contamination and known landfills are also present.
- **Air and Climatic Factors** – The long term effects of rising sea levels, increased storms, changes in weather patterns and increased wave heights expected due to climate change could have significant implications for future flood risks to the natural, historic and built environment across large areas of low-lying land in the SMP area.
- **Water** – Within the SMP area, there are numerous surface and ground water bodies, and over 70 designated bathing waters. These all have the potential to be affected by SMP policies.
- **Landscape** – The high value of the landscape in the SMP area (with the exception of Portland) is recognised by the designation of five Areas of Outstanding Natural Beauty (AONB) and four Heritage Coasts. These are national designations to conserve and enhance their natural beauty;
- **Cultural Heritage, including architectural and archaeological heritage** – The SMP area contains one cultural WHS (in addition to the natural WHS referred to above) and a complex array of statutory historic buildings, Registered Parks and Gardens, non-statutory buildings and find spots, historic settlements, maritime archaeology, Conservation Areas, historic landscapes and unscheduled sites of importance.
- **Material Assets** – Material assets along the coastline of the SMP area comprises a combination of predominantly moderate quality agricultural land, beaches, A- and B-roads, urban areas, fishing ports and harbours, stone and mineral extraction sites and historic/active landfill sites.
- **Population and Human Health** – Safety, security and social/physical well-being for occupants of properties within areas at coastal flood or erosion risk; population and properties are concentrated in Portland, Weymouth, Bridport, Lyme Regis, Seaton, Sidmouth, Budleigh Salterton, Exmouth, Exeter, Dawlish, Newton Abbot, Teignmouth, Shaldon, Torquay, Paignton, Brixham, Dartmouth, Kingsbridge, Salcombe, Saltash, Torpoint and Plymouth, and other smaller towns/villages. Recreation and tourism in the study area is largely centred on the coastline. Land based activities generally rely on the natural environment and comprises swimming, beaches, walking, fishing, fossil collecting, bird watching and rock climbing. Water sports are also a popular pursuit.

1.3 SEA Objectives

SEA objectives were identified for the SMP to appraise the preferred policy options during the assessment process. These objectives were developed following identification of key environmental features or assets along the coastline, through a review of aerial photography, maps, consultation with stakeholders and an understanding of the strategic environmental issues along the coastline:

- To avoid loss of property due to erosion and/or manage risk of flooding to people and property.
- To avoid loss due to erosion of, and manage risk of flooding to, key community, recreational and amenity facilities.
- To avoid loss due to erosion of, and manage risk of flooding to, industrial, commercial and economic assets and activities.
- To minimise the impact of policies on marine operations and activities.
- To ensure critical road and rail linkages are maintained.
- To ensure critical services remain operational.
- To support natural processes and maintain visibility of geological exposures throughout internationally and nationally designated Earth Heritage sites.
- To support natural processes and maintain the integrity of internationally designated nature conservation sites and the favourable condition of their interest features.
- To avoid adverse impacts on, conserve and, where practical, enhance the designated interest of nationally designated nature conservation sites.
- To avoid adverse impacts on, conserve and, where practical, enhance the designated interest of locally designated conservation sites.
- To prevent pollution from contaminated sources.
- To avoid loss of scheduled and other internationally and nationally important heritage assets and features.
- To conserve and enhance AONBs (by maintaining the highest quality of undeveloped coastal and estuarine landscape as a defining feature of the AONB) and avoid conflict with AONB Management Plan or Heritage Coast Objectives.
- To avoid loss due to erosion of and/or manage risk of flooding to agricultural land.
- To ensure MoD ranges remain operational.

1.4 Alternative SMP Policy Options

Four generic coastal management options were considered as part of the policy plan and these are listed in Table I.1. The shoreline management policies considered are those defined by Defra (2006).

Table I.1 SMP Policy Options

SMP Policy	Description
Hold the line	Maintain or change the level of protection provided by defences in their present location.
Advance the line	Build new defences on the seaward side of the existing defence line to reclaim land.
Managed realignment	Allowing the shoreline position to move backwards (or forwards) with management to control or limit movement.
No active intervention	A decision not to invest in providing or maintaining defences.

A 'with present management' policy was also assessed during the development of the SMP. This policy assumes that the present management practices will be continued indefinitely, regardless of economic or technical constraints.

An environmental assessment of the alternative SMP policy options on SEA receptors was carried out (see **Appendix F of the SMP**). Based on this assessment and a comparison of how well the SEA objectives have been achieved for the various policy scenarios, the environmentally preferred policy scenarios were identified.

1.5 Consultation

Consultation has been central to the development of the SEA in order to arrive at a SMP that is acceptable to as many parties as possible and to engage those parties in the process. Effective stakeholder and public engagement has been essential for data collection, identification of key issues, definition of SEA objectives, development of policy scenarios and the selection of the preferred Plan.

The consultation process has been active from the inception stage and has continued throughout the development of the SMP.

The public were provided with the opportunity to comment on the draft SMP and SEA via the distribution of a summary leaflet and the SMP and SEA documents were made available for viewing. A three month public consultation on the draft SMP, including the SEA was carried out between April and July 2009.

The SMP was then finalised based on all the comments received and disseminated to stakeholders and the public.

Full details of the consultation process including consultation materials, representations made and comments on how they have been taken into account have been documented in Appendix B to the main SMP. Responses received from consultees during the development of the SMP and SEA covered a wide range of issues. Specific comments made in relation to the draft SMP and SEA related to the following: -

- Requirement for a Habitat Regulations Assessment, Water Framework Directive Assessment, Non-technical Summary and Action Plan
- Opportunities for habitat creation
- Need to consider non-designated historic environment, farmland, full economic value of tourism and infrastructure and how to manage change
- Need to consider the plans and objectives developed by other organisations

- Changes required to policy options and policy unit boundaries as a result of specific queries
- Erosion rates may be overstated or over simplistic

1.6 Environmental Impacts of the SMP

The predicted potentially significant impacts associated with the preferred policy options are presented in **Annex I of this appendix (Appendix I 'SEA')**, and are summarised below.

Biodiversity, Flora and Fauna: The SMP seeks to support natural processes and maintain wildlife (including the condition of designated sites) along the coastline. The SMP recommends the preferred policies of no active intervention or managed realignment where it would be possible to enhance and/or create new areas of wetland habitat within or adjacent to designated conservation sites, which would have beneficial impacts.

However, in some locations, holding the line is essential to protect cities or towns. In some of these locations, coastal habitats such as sand dunes, saltmarsh, mudflats and/or sandbanks may be adversely affected (e.g. at Portland Harbour) or lost in the long term due to expected future sea level rise as they may become squeezed against fixed defences or cliffs. In other areas, where defences will continue to be maintained, some designated freshwater or terrestrial habitats may benefit from holding the line and be protected from coastal flooding.

Where impacts on international conservation sites are possible, further assessment (a Habitats Regulations Assessment) has been undertaken. This assessment demonstrates that there is potential for uncertain and potentially adverse impacts on seven international conservation sites as a result of either coastal squeeze losses of intertidal habitat, losses of dune habitat or loss of vegetated cliff habitat due to holding the line. The affected sites are as follows: -

- Exe Estuary Special Protection Area (SPA) and Ramsar site
- Plymouth Sound and Estuaries Special Area of Conservation (SAC)
- Tamar Estuaries Complex SPA
- Dawlish Warren SAC (short-term only)
- Chesil Beach and the Fleet SAC
- Sidmouth to West Bay SAC
- Isle of Portland to Studland Cliffs SAC

Intertidal and dune habitat will be delivered through the South West Regional Habitat Creation Programme to compensate for losses resulting from the SMP.

Mitigation measures will be put in place to minimise or avoid adverse effects on other designated nature conservation sites.

There are often conflicts between allowing the coastline to evolve naturally (benefiting marine or intertidal habitats) and maintaining designated terrestrial/freshwater sites on the land. In such areas, any SMP policy will result in some loss of habitat. Careful management of the shoreline between Durlston Head and Rame Head will therefore be necessary to manage the designated habitats in place wherever possible, while managing and adapting to changes due the impact of future sea level rise. Some habitat losses will occur due to sea level rise as the frontage reacts to increasing pressure, for example, as Chesil Beach rolls-back into The Fleet causing narrowing of the lagoon and loss of designated habitat. However, often this will not be a result of SMP policy but would occur due to natural change with or without the SMP.

Earth Heritage, Soils and Geology: The proposed SMP seeks to support natural processes and maintain the visibility of and accessibility to geological features, as well as the conservation value of the internationally and nationally important earth heritage sites wherever possible. There are, however, some areas where continued protection of towns or villages is required and in some of these areas the SMP policies may damage geology or earth heritage features. In general, the SMP is not recommending the construction of new defences to maintain economic assets in areas where none are currently present.

Along many areas of the frontage, beach management is proposed to maintain natural features, particularly in the short-term. However, where holding the existing line of defence is proposed to protect significant urban communities, increasing sea levels may result in the narrowing of natural defence features in the future.

Air and Climate: No impacts on air and climate are anticipated as a result of the preferred SMP.

Water: In most areas along the coastal frontage, the preferred SMP policy provides protection from flooding or erosion to the majority of potentially polluting sites such as landfills. However, there are a few areas where flooding or erosion of landfills may be experienced and will therefore require further study at project level if a policy of no active intervention is adopted.

A retrospective Water Framework Directive (WFD) assessment has been prepared by Halcrow and can be viewed in **Appendix K 'Water Framework Directive Assessment'** of the SMP. This WFD-related retrospective assessment assesses the potential effects of policy options on the ecological quality elements of water bodies affected by the SMP. Generally, the proposed policies meet the WFD objectives. However, there are ten policy scenario areas where the proposed policies may affect water bodies.

Landscape Character and Visual Amenity: The proposed SMP policies seek to achieve a free functioning natural coastline wherever possible, thus creating a more natural coastal landscape and reducing piecemeal man-made structures on the beach. This is more beneficial to the landscape than defending the whole coastline, which would involve construction of new, more substantial defences, which in some places would also be unlikely to be technically sustainable or economically viable. A policy of no active intervention would help to conserve and enhance the quality of the landscape and seascape of the AONB, Heritage Coast and UNESCO Dorset and East Devon 'Jurassic Coast' World Heritage Site. However, it is recognised that loss of some coastal landmarks or well known landscape features, to which the AONB designation refers, may affect the quality of the landscape should they be of special character. In addition, where a no active intervention policy is recommended, there is the potential for unsightly defences as they deteriorate in the long-term. Measures may be needed to remove such structures, particularly if they also pose a health and safety risk.

A hold the line policy involving pro-active management of the existing beaches and defences is still required in some areas to protect dense urban areas and this can result in changes to landscape character and negative effects on views for people living, working or visiting the area.

Generally, the SMP policies conserve nationally designated landscapes and avoid conflicts with AONB Management Plan or Heritage Coast objectives, though localised changes in landscape (e.g. landscape changes resulting from the potential loss of coastal features) will need to be considered further at a more detailed level when approaches to delivering policy are determined.

Historic Environment: There are a wide range of heritage sites along the coast and many more of these will be protected through the preferred policies than would survive under a no active intervention policy. Where heritage assets would be protected through implementation of the SMP, opportunities will be sought at scheme level to improve the condition of heritage sites and features, where appropriate.

However, along some stretches of coastline where changes in management policy are proposed, there may be possible damage to or loss of historic environmental features in the longer term due to flooding and/or erosion including:

- Scheduled Monuments including Sandsfoot Castle in Weymouth;
- Small areas of Registered Parks and Gardens e.g. Encombe, Lulworth Castle, Rousdon, Connaught, Overbecks, Langdon Court, Flete, Mount Edgcumbe;
- Grades I and II Listed Buildings;
- Potentially nationally important non-designated archaeological assets; and
- Other archaeological features that would require consideration at the scheme level including regionally and locally non-designated archaeological assets and HER features, historic landscapes and palaeo-environmental deposits.

Land Use, Infrastructure and Material Assets: For much of the coastline, the SMP policies will not affect critical infrastructure such as the mainline railway that runs between Dawlish and Teignmouth, crucial services or marine activities. However, it will become increasingly difficult to minimise the risk to infrastructure and material assets in some areas in the long-term as sea level rise causes holding the line to become less acceptable due to economics, technical sustainability and environmental acceptability. In these areas, some re-routing of major infrastructure will be required in the longer term under this SMP. However, in some areas it may not be possible to provide replacement infrastructure inland and so alternative adaptation measures may be required, as are already being developed and implemented at Slapton Sands in preparation for the eventual closure and loss of the A379.

The proposed SMP policies are generally beneficial to industrial and commercial premises and/or activities, by protecting areas of significant development from flooding or erosion, including new maritime developments such as the National Sailing Academy facilities at Osprey Quay. However, some isolated industrial or commercial facilities may be affected, as policies leading to a more 'natural' and sustainable shoreline in the long-term are implemented.

As the MoD ranges lie generally within undeveloped stretches of coastline, the preferred SMP policies may result in the erosion of small areas of ranges in the short to long-term. These losses are likely to be minimal and therefore unlikely to affect their operational nature.

Under the preferred policies there could be loss or damage to approximately 2,800 hectares of agricultural land, which will remain at risk of flooding, even where low-level defences are present, by year 2105.

Population and Human Health: For much of the coastline, the preferred SMP policies will maintain protection where cost-effective to do so in the long-term, thus having a beneficial impact on people, their health and property by protecting areas of significant urban development and developed parts of the coastline from flooding or erosion. The proposed SMP policies will protect many residential properties in large urban areas that would be at long term risk of loss. However, there are some areas where isolated properties, caravan sites, holiday centres and urban areas exist (e.g. at Ringstead, Hive Beach - Burton Bradstock, East Beach - West Bay, Seatown, Charmouth, Branscombe, Torcross and Beesands) but may experience losses in the future as a result of flooding or erosion through allowing the coastline to retreat naturally.

For the preferred policies, the total loss of housing to coastal erosion within the SMP area up to year 2025, is approximately 160 residential and commercial properties. This compares to the no active intervention option, when potential erosion losses of up to 580 residential and commercial properties could occur. The preferred policies deliver coastal erosion protection to over 700 'at risk' residential and commercial properties over the next 100 years.

Under the preferred long-term policies, the key centres of tourism and recreation (e.g. Weymouth, West Bay, Lyme Regis, Sidmouth, Exmouth, Dawlish, Teignmouth and Torbay) will continue to be protected. However, this will be at the expense of beaches along many of these frontages, which are unlikely to be retained as the frontages and promenades become more exposed and less accessible. Therefore any areas where future defence can be implemented in a way that retains beach resource are likely to become increasingly important as tourism assets for the wider region.

1.7 What happens now?

There are a number of steps required to ensure that the recommendations of the SEA and SMP are taken forward in the short and medium-term, both in land use planning and coastal defence management. Actions to facilitate the implementation of the longer-term policies also need to be initiated as appropriate.

Generally, the policy recommendations in the SMP will be implemented through the development of coastal flood risk management strategies, which cover smaller but strategically linked sections of the coast. Subsequently, implementation of coastal flood and erosion risk management schemes will deliver works on the ground. Environmental Statements and Appropriate Assessments will be prepared at scheme level, and these will be subject to public consultation.

The plan, which will require on-going review, will be informed by further understanding of changes in the environment, policy/legislation changes and environmental assessment. The process of implementation will be underpinned by monitoring of the shoreline to identify ongoing behaviour, together with targeted study and investigation where there are specific uncertainties. Monitoring of environmental receptors such as designated habitats, areas of potential contamination etc will inform environmental assessment at the strategy and scheme level. Details of the steps to be taken in advance of the next SMP review are set out in the SMP Action Plan.