

23 Sandown Castle to Oldstairs Bay

The towns of Deal, Walmer and Kingsdown dominate this section of the coast. Built assets extend to the shoreline, which in many places is fronted by popular tourist beaches and backed by low-lying land. The long term plan is to **Hold the Line**, continuing to protect the towns of Deal, Walmer and Kingsdown. However, under a scenario of sea level rise, narrowing of the beach is predicted.

24 Oldstairs Bay to St Margaret's

The steep chalk cliffs become coincident with the current shoreline at Oldstairs Bay and continue through to St. Margaret's. The majority of this frontage is undeveloped, unprotected and eroding. As such, the long term policy is **No Active Intervention**, which will enhance the nature conservation and landscape value. The former Ministry of Defence Rifle Range, which lies at the northern section of this frontage, is in a state of disrepair and its removal may need to be managed during the course of the SMP.

25 St Margaret's

This section of coast includes the cliff-top village of St Margaret's as well as the development at the base of the cliffs, on the undercliff platform. The long-term plan is to **Hold the Line**, continuing to protect the assets. It is acknowledged that defending the shoreline here impacts upon the environmental and landscape quality of the cliffs. As such it recommended that management practices are considerate to the surroundings.

26 South Foreland

South Foreland marks the southern extremity of the SMP frontage. This is an area of eroding chalk cliffs, supporting little cliff-top development, with high nature conservation and landscape value. The long term policy is **No Active Intervention**, thereby allowing the cliff to continue eroding. This will maintain the important geological and environmental interests of the frontage, as well as its landscape quality. The coastal footpath may need re-routing over time, but very few built assets will be threatened. Whilst narrowing of the intertidal chalk platform is likely to occur with sea level rise, it will be partially offset by the natural creation of a new platform during cliff retreat.

Isle of Grain to South Foreland

Shoreline Management Plan

2007



Consultation Plan Summary



The South East Coastal Group has developed two Shoreline Management Plans (SMPs) that cover the area of the North and East Kent Coast between the Isle of Grain in the north-west and South Foreland in the east; including the Medway Estuary, up to Allington Lock in Maidstone, and the Swale. This leaflet summarises the recommendations for the coastline between the Isle of Grain and South Foreland. The policies for the Medway Estuary and Swale are contained in a second leaflet.

The Changing Coastline

The coastline is constantly changing. Waves and tides naturally erode some areas of the coastline and deposit the eroded material at others. The amount of physical change depends on the degree of exposure, the underlying geology and the structures present. Coastal changes usually take place over many years and this can be seen where parts of villages have been lost through erosion or where former coastal villages are now landlocked because of coastal build up.

Human interventions to prevent or reduce flooding and erosion have also had an influence on the evolution of our coastline. In some cases these interventions have taken place without an appreciation of the effect that they have on other locations up and down the coast.

Whilst these changes continue, social, economic and environmental pressures are increasing in coastal areas. People enjoy living by and visiting the coast and so there is always pressure for more housing. As international trade increases so does the demand for port space and associated coastal-based industry. Such development places stress on natural coastal habitats that are often unique and of national and international importance.

Climate Change and Sea Level Rise

Much of the present shoreline of the English Channel was shaped by sea level rise following the last ice age. Approximately 10,000 years ago, the English Channel started to flood as sea levels rose. Initially the channel was only a river, but within 2000 years the entire English Channel had become a sea. For the last 8000 years, sea level rise has continued at a much slower pace. However, we are now entering a period of increased sea level rise which will result in changes to our present coastal systems.

Recent studies have indicated that there are significant changes occurring within our climate. These include:

- Greater frequency of storms;
- Increasing wave heights;
- Increasing rainfall; and
- Rising sea levels.

This all points towards stormier coastal conditions which will increase erosion, especially where the coast is formed from soft geology. Cliff erosion rates may also increase due to increased rainfall between longer periods of drier weather.

Rising sea levels mean that coastal defences have to be larger and cost more to maintain. This also makes the consequence of a



St. Margaret's Bay

failure in the defences more catastrophic to the people and places they protect. These defences can also prevent the natural landward movement of coastal habitats under rising sea levels, which can cause a problem called 'Coastal Squeeze', whereby habitats are lost.

What does this mean?

Even if the defences are continually improved where they are now, it is likely that the beaches and coastal environments in front of them will be changed by the effect of the sea. This means we need a long-term plan (the SMP) to co-ordinate how our coast is managed. The SMP identifies how our coastline can be best managed over the next 100 years in order to prevent the loss of beaches and to best protect the people in coastal communities.

The Study Area

The coastline covered by this plan has a rich diversity in its physical form, human usage and natural environment. This includes: the London clay sea cliffs in the north; the dramatic white chalk cliffs of Thanet and South Foreland; the extensive lowlands of Grain, Sheppey, Graveney and the former Wantsum Channel area; large urban areas fringing the coast; extensive areas of agricultural land, and many areas designated and protected for their heritage, landscape, geological and biological value. This combination of assets creates a coastline of great value, with a tourism economy of regional importance.

What is a Shoreline Management Plan (SMP)?

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. It does not set policies for the management of issues such as development or land drainage. The main objective of the SMP is to identify sustainable long-term

management policies for the coast. It is inevitable that the plan will recommend changes to the current approach, however, the plan will help manage these so that the people, places, industry and wildlife affected can adapt at a reasonable pace. This approach avoids tying future generations into inflexible and expensive options for defence.

The shoreline management policies considered are those defined by the Department for the Environment, Food and Rural Affairs (Defra). The policies are:

Hold the line	Maintain or upgrade the level of protection provided by defences;
Advance the line	Build new defences seaward of the existing defence line;
Managed realignment	Allow retreat of the shoreline, with management to control or limit movement; and
No active intervention	A decision not to invest in providing or maintaining defences.

The coastline of the SMP has been broken up into geographical areas, called 'Policy Units'. The plan covers three different time periods 0-20 years, 20-50 years and 50-100 yrs and assesses the best policies for each unit for each time period.

Coastal Defence Planning

There are three tiers of coastal defence planning in England and Wales, each with discrete roles in the risk management process:

SMP	Identifies general policies and general implementation requirements;
Strategy	Identifies nature and timing of works to be undertaken; and
Scheme	Design and construction of capital works and maintenance.

The SMP forms the highest tier in this process and sets the long term direction for implementation of risk management techniques.

How has the Plan been developed?

The plan has been developed in line with latest Government (Defra) guidance which can be found in full at www.defra.gov.uk/eviron/fcd/policy/smp.htm (2006). It has two main influences, technical assessment and democratic input, and is developed in phases. At the end of this process our stakeholders provide feedback on the plan after considering the technical findings.

Democratic Input

The plans have been developed by the South East Coastal Group which consists of the Coastal District Councils (Medway Council to Dover Council), the Environment Agency, Natural England (formerly English Nature), English Heritage and Kent County Council. All decisions made by the group are agreed with Elected Members (local councillors) to make sure the decisions are democratic and to ensure that local interests are being properly represented. This coastal group is diverse and represents a lot of different interests. To make sure that the plan was properly informed about

local issues and interests, a stakeholder group consisting of 240 organisations (conservation groups, Non-Governmental Organisations, Parish councils, National Farmers Union, Country Landowners Association, Infrastructure providers) was set up and have been involved throughout the development of the plan. Further to this, 42 of the stakeholders, known as the Key Stakeholder Group, have been actively involved in workshops and meetings to input into the democratic development of the plan.

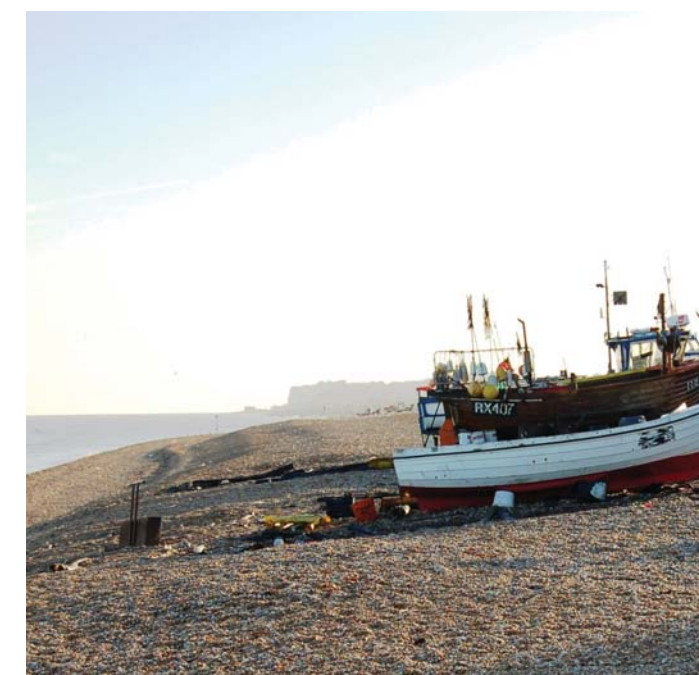
Technical Assessment

The 100 year appraisal timeframe forces us to look beyond the anticipated life of all coastal defence structures and into a period when climate change will have a significant impact on coastal management.

To determine whether there is a need to manage the coast, a baseline scenario, referred to as 'No Active Intervention', is employed. This scenario identifies what could happen to the coastline over the next 100 years if all defences were allowed to fail. By considering this scenario, the assets potentially affected by coastal erosion and flooding can be identified and objectives associated with their future management defined, e.g. protection of properties and environmental enhancement. These objectives are, in part, defined through the involvement of those with an interest in the coast (the Stakeholders).

These objectives are then used to determine policies for the next 100 years. In this way, policy is set with full acknowledgement of the potential environmental, financial, technical and social costs and benefits.

Policies for each section of coast (Policy Units) are presented on the reverse of this leaflet, with full appraisals presented in the main SMP documents.



Walmer Beach

What Happens Next?

Following this period of consultation, the responses will be assessed and the final version of the SMP will be presented to each Local Authority for adoption. When the SMP is finished, it is likely that further studies will be required in a number of areas to develop and implement the recommended policies.

How can I get Involved?

To date, the key stakeholders and elected members have represented your interests, however we are now consulting the public on the findings of the plan and would welcome your views.

We invite you to review the policies and provide your feedback either online at smp@canterbury.gov.uk or by post to South East Coastal Group c/o Military Road, Canterbury, Kent. CT1 1YW

The Shoreline Management Policies

The following summarises the justification and impacts of the 100-year management plan defined for each Policy Unit in the SMP.

1 Allhallows-on-Sea to Grain

This is a largely undeveloped low-lying area of international nature conservation importance. The recommended policy in the short term is to **Hold the Line**, which will be achieved by maintaining and improving the existing defences. However, in the medium and long term (20-50 and 50-100 years), a policy of **Managed Realignment** is recommended; defences will be allowed to fail and managed retreat of the coastline allowed to commence. This will generate a naturally functioning coastline, reduce the impact of coastal squeeze and enhance the nature conservation value of the frontage. As this frontage forms part of a large flood risk area, the potential for flood inundation, will be managed. The exact position of flood defence structures has not been defined in the SMP, but a maximum extent has been provisionally agreed.

2 Garrison Point to Minster

A dense urban area dominated by the port and associated developments. The long term policy is to **Hold the Line**. This will protect the developments that extend to the shoreline edge throughout the frontage. The policy will include maintenance of the existing defences, and this will prevent erosion of the seafront and manage flood risks. However, in light of ongoing sea level rise the inter-tidal area will narrow and beaches will reduce unless they are artificially maintained.

3 Minster Town

This is a dense urban area, developed to the edge of the low coastal slope, fronted by a shingle beach of amenity and tourism importance. A long term policy of **Hold the Line** is recommended to protect the frontage of this regionally important town. The policy will include maintenance of the existing defences. The policy will prevent erosion of the seafront and its associated assets. Ongoing sea level rise is likely to result in a significant narrowing of inter-tidal areas and beaches will narrow unless they are artificially maintained.

4 Minster Slopes to Warden Bay

An area of unprotected cliffs that are of national environmental and geological importance due to their landscape value and relatively sparse cliff top development. The long term policy here is to allow natural cliff retreat under **No Active Intervention**. This policy will maintain the landscape and environmental quality of the frontage. However, there will be some loss of agricultural land and caravan parks and sections of the coastal footpath may need to be re-routed. This policy will maintain an input of sediment (fines) to the shoreline which will benefit this frontage and those to the west.

5 Warden Bay to Leysdown-on-Sea

This unit covers the village of Warden Bay, which has a cliff toe defence structure in place, that is designed to reduce, but not prevent erosion, a low-lying area known as 'The Bay' and the low-lying village of Leysdown-on-Sea. The short term plan is to upgrade and maintain the current defences at Warden, under a combined policy of **Hold the Line** and **Managed Realignment**. In the medium and long term, a combined policy of **Hold the Line** and **Managed Realignment** will continue. However, it is envisaged that the effectiveness of the toe defence at Warden will reduce. At The Bay, some inundation of the hinterland is anticipated. This approach will allow the shoreline to respond naturally; reducing the impact of coastal squeeze and preventing uncontrolled flooding.



Areas at risk from tidal and fluvial flooding (from Indicative Floodplain Map 2005, Environment Agency)

Isle of Grain to South Foreland SMP Management Units

6 Leysdown-on-Sea to Shell Ness
The frontage comprises a largely unmanaged sand and shell beach, which is backed by low-lying coastal grazing marsh. A policy of **Managed Realignment** is recommended. Although property and land losses are associated with this policy, this policy is considered to be sustainable in the long-term, on the basis that environmental and engineering benefits will be realised and that the flood risk will be managed. No specific realignment 'line' has been defined but it is anticipated that realignment along this stretch of the coast would involve the construction / improvement of secondary defences. This frontage connects with the Medway Estuary and Swale SMP (Shell Ness to Sayes Court).

8 Seasalter to Whitstable Town (Golf Course)
This is a developed area backed by coastal slopes including the town of Seasalter and its associated amenity assets. A long term policy of **Hold the Line** is recommended to reduce flood risk to the significant built development. This will be achieved by maintaining and improving the existing defences. A major impact of this policy will be the narrowing of the sandy inter-tidal area which will be highly susceptible to coastal squeeze under rising sea levels. As such, it is likely that there will be little or no beach here in 100 years time.



Sandwich Bay

9 Whitstable Town (Golf Course) to Whitstable Harbour (east)
The harbour and the town of Whitstable dominate this section of the coast. Development extends to the beach edge within a flood risk area. A long term policy of **Hold the Line** is recommended for this frontage to protect the extensive developments from flooding and erosion. This approach will ensure the continued operation of the harbour and associated commercial and recreational operations, as well as protecting a large number of residential developments. The town is also of heritage importance.

10 Whitstable Harbour (east) to Swalecliffe
The urban area is developed to the edge of the coastal slope and fronted by a shingle beach of amenity and tourism importance. A long term policy of **Hold the Line** is recommended to protect the frontage. The policy will include maintenance of existing defences, however, such maintenance will result in continued disruption of coastal processes. The policy will prevent erosion of the seafront and its associated assets. Ongoing sea level rise is likely to result in a significant narrowing of inter-tidal areas unless beaches are artificially maintained.

11 Swalecliffe to Herne Bay Breakwater
This is a dense urban area developed to the water's edge and fronted by a shingle beach of amenity and tourism importance. A long term policy of **Hold the Line** is recommended to protect the frontage of this regionally important town. The policy will include maintenance of the existing breakwater and defences. The policy will prevent erosion of the seafront and its associated assets and this will aim to manage the flooding risks. Ongoing sea level rise is likely to result in a significant narrowing of inter-tidal areas unless beaches are artificially maintained.

12 Herne Bay Breakwater to Bishopstone Manor
A dense urban area, developed to the edge of the low coastal slope, which is of international nature conservation importance and fronted by a shingle beach of amenity and tourism importance. A long term policy of **Hold the Line** is recommended to protect this frontage. The policy will include maintenance of the existing defences. However, such maintenance will continue to prevent sediment input from cliff erosion and will further disrupt coastal processes. However, the policy will protect the assets. Ongoing sea level rise is likely to result in a significant narrowing of inter-tidal areas unless beaches are artificially maintained. This has the potential to impact upon the tourism of this area unless artificial maintenance is implemented.



Whitstable Harbour

13 Reculver Country Park
This is an area of unprotected cliffs of international environmental and geological importance, with high landscape value and no significant cliff top development. The long term policy here is to allow natural cliff retreat under **No Active Intervention**. This policy will maintain the geological, landscape and environmental quality of the frontage. However, there will be some loss of agricultural land and a need to relocate caravan parks in the longer term. Sections of the coastal footpath will need to be re-routed. This policy will maintain an input of sediment to the shoreline which will benefit this area and those to the west.

14 Reculver Towers to Minnis Bay
The frontage includes a managed beach which is backed by a largely undeveloped low lying land of international nature and heritage importance. The short term plan is to continue protecting the assets under a policy of **Hold the Line**. Thereafter, the plan is to realign the defences along the majority of this frontage, under a policy of **Managed Realignment**. This will allow the shoreline to retreat in a controlled manner, under a policy of managed realignment. It is anticipated that realignment along this stretch of the coast would involve the construction / improvement of secondary defences. The exact position of flood defence structures has not been defined in the SMP, but a maximum extent has been provisionally agreed. Reculver Towers would remain protected by maintaining and upgrading the existing defence structures.

15 Minnis Bay to Westgate-on-Sea
The coastline between Minnis Bay and Westgate-on-Sea is characterised by steep, chalk cliffs which are of high conservation and landscape importance. The towns of Birchington and Westgate are set back from the cliff top. The recommended policy is to continue maintaining and improving defences where there is an economic justification, under a policy of **Hold the Line**. However, if through detailed studies an opportunity for not maintaining a current defence is identified then this will be implemented, under a policy of **No Active Intervention**. Where there currently are no defences in place, a continuation of **No Active Intervention** is recommended.

16 Margate
A dense urban area dominated by the harbour and associated assets. The long term policy is to continue maintaining and upgrading the defence structures, under a policy of **Hold the Line**. This will protect the developments that extend to the shoreline edge throughout the frontage, as well as the residential, commercial and industrial assets. The frontage is of conservation and landscape importance. The foreshore is also of nature conservation and landscape importance.

17 Cliftonville
Cliftonville is characterised by steep, chalk cliffs which are of high conservation and landscape importance. The town is set back from the cliff top. The recommended policy is to continue maintaining and improving defences under a policy of **Hold the Line**, where there is an economic justification to do so. However, if through detailed studies an opportunity for not maintaining a current defence is identified, then this will be implemented, under a policy of **No Active Intervention**. Where there currently are no defences in place, a continuation of **No Active Intervention** is recommended.



Kingsdown

18 White Ness to Ramsgate
White Ness to Ramsgate is characterised by steep, chalk cliffs which are of international conservation and landscape importance. The village of Kingsgate and town of Broadstairs are set back from the cliff top. The recommended policy is to continue maintaining and improving defences under a policy of **Hold the Line**, where there is an economic justification to do so. However, if through detailed studies an opportunity for not maintaining a current defence is identified then this will be implemented, under a policy of **No Active Intervention**. Where there currently are no defences in place, a continuation of **No Active Intervention** is recommended.

19 Ramsgate
A dense urban area dominated by the port and associated developments. The long term policy is to continue maintaining and upgrading the defence structures, under a policy of **Hold the Line**. This will protect the developments that extend to the shoreline edge throughout the frontage and the residential, commercial and industrial assets. There are also areas of local nature conservation importance within the urban area.

20 Ramsgate Harbour (west) to north of the River Stour
A strategic road link to the port of Ramsgate runs along the lower section of the defended chalk and sandstone cliffs, whilst the settlements of Pegwell and Cliffs End occupy a set back cliff top position. In the west, the cliffs give way to low-lying land, which is of environmental and agricultural importance, and tidal flats which are internationally recognised. Despite the developments, the frontage is environmental, geological and landscape importance. The recommended policy is to continue maintaining and improving defences under a policy of **Hold the Line**, where there is an economic justification to do so. However, if through detailed studies an opportunity for not maintaining current defences is identified, then **No Active Intervention** will be implemented. Where there currently are no defences in place, a continuation of **No Active Intervention** is recommended.

21 South of the River Stour to Sandwich Bay Estate (north)
A largely undeveloped frontage which is fronted by accreting sand dunes of international conservation importance and backed by nationally important golf links and the historic town of Sandwich. The long-term policy here is to protect the town of Sandwich and limit large scale flood inundation, under a policy of **No Active Intervention**. This policy agrees with the objectives of the 'River Stour Catchment Flood Management Plan' and the Sandwich Bay Strategy Study. Currently there are no formal shoreline defences in place, as the fronting sand dunes are accreting naturally and provide a suitable standard of protection. Inland fluvial flood risk management practices will be maintained / implemented which, combined with the informal defences along the open coast, will limit the flood risk to Sandwich. However, should the dunes begin to erode, it is anticipated that appropriate management practices would be put in place to limit the amount of flooding to the hinterland.

22 Sandwich Bay Estate (north) to Sandown Castle
The long term plan is to manage flood risk and protect the backing hinterland and its associated assets under a policy of **Hold the Line**. Land here is very low and flood inundation could potentially affect an extensive area i.e. connecting the north Kent coast with the east Kent coast. A major impact of this policy will be the narrowing of the inter-tidal area. This will be highly susceptible to 'coastal squeeze' under a scenario of sea level rise, thereby resulting in the possibility of little or no beach remaining in 100 years time. However, this will be offset by continuing to provide protection to environmental, residential and commercial assets, as well as regionally important infrastructure and nationally important golf links.



Isle of Grain