

Appendix F: Initial Policy Appraisal and Scenario Development

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Contents by Policy Unit

Note the geographic breakdown of the appraisals presented in this Appendix is not necessarily the same as the final Policy Units (PU). Here the breakdown has been based upon coastal process and morphological changes along the shoreline. For ease of reference, the following table identifies the page number on which appraisals relevant to each PU start.

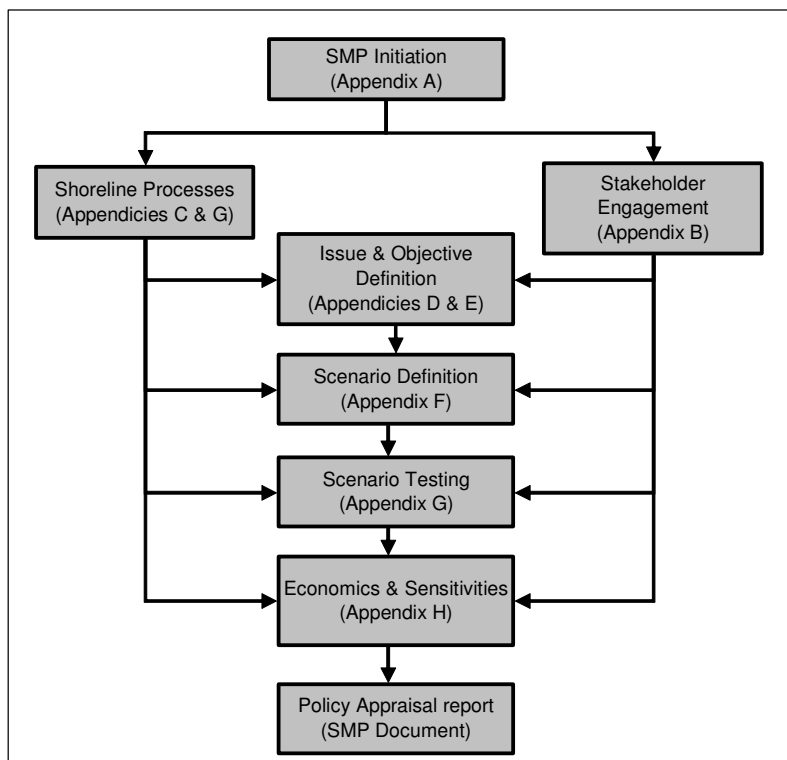
	Policy Unit	Theme & page number	
		Potential Policy Options	Initial Policy Scenarios
4c01	South Foreland to Dover	9	N/A
4c02	Dover	9	29
4c03	Shakespeare Cliff	10	29
4c04	Samphire Hoe	11	29
4c05	Abbots Cliff	12	29
4c06	Folkestone Warren	13	29
4c07	Copt Point	14	29
4c08	Folkestone and Sandgate	14	29
4c09	Sandgate to Hythe	15	30
4c10	Hythe Ranges	16	30
4c11	Dymchurch to Romney Sands	16	30
4c12	Romney Sands to Dungeness	17	30
4c13	Dungeness Power Station	17	30
4c14	Lydd Ranges	18	30
4c15	Jury's Gap to The Suttons	18	30
4c16	Camber Sands	19	30
4c17	River Rother	19	32
4c18	River Rother to Cliff End	20	32
4c19	Cliff End to Fairlight Cove	21	33
4c20	Fairlight Cove East	21	33
4c21	Fairlight Cove Central	22	33
4c22	Fairlight Cove West	22	33
4c23	Fairlight Cove to Hastings	23	33
4c24	Hastings	23	34
4c25	Bulverhythe and Glyne Gap	24	34
4c26	Bexhill and Cooden	24	35
4c27	Pevensey and Hooe	25	35
4c28	Sovereign Harbour	25	35
4c29	Eastbourne	26	N/A
4c30	Beachy Head	26	N/A

The Supporting Appendices

This appendix and the accompanying documents provide all of the information required to support the Shoreline Management Plan. They ensure that there is clarity in the decision-making process and that the rationale behind the policies being promoted is both transparent and auditable. The appendices are:

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	All communications from the stakeholder process are provided here, together with information arising from the consultation process.
C: Baseline Process Understanding	Includes baseline process report, defence assessment, NAI and WPM assessments and summarises data used in assessments.
D: Thematic 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 (as presented in the Shoreline Management Plan document).
H: Economic Appraisal and 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 examination and retrieval.

Within each appendix cross-referencing highlights the documents where related appraisals are presented. The broad relationships between the appendices are as below.



F1 Introduction

This Appendix outlines the key steps undertaken in the development and definition of policies. Policy scenarios have then been taken forward and appraised and the results of this appraisal are presented in [Appendix G](#).

The recommended approach (Defra Guidance) for development of a sustainable final plan is through the assessment of policy scenarios, rather than considering locations in isolation. The aim of this stage has therefore been to identify the appropriate combinations of policies to be appraised for the whole SMP frontage. This has involved the following activities:

- Identification of 'key policy drivers'
- Identification of potential policy options through the broad-level appraisal of the four generic Defra policy descriptors
- Development of policy scenarios for assessment.

It should be noted that the first two tasks have looked at individual locations in relative isolation, but wider-scale impacts of policies have been assessed during the policy scenario appraisal stage which has looked at the likely shoreline response and evolution both locally and along the SMP coast as a whole.¹

¹ Refer to appendix G

F2 Identification of 'key policy drivers'

F2.1 DEFINITION

A 'key policy driver' can be defined as a feature that has sufficient importance in terms of the benefits it provides that it potentially has an overriding influence upon policy selection at the wider SMP scale; this may be through either promoting a policy or discarding a policy for a particular location or locations.

There are no specific criteria which define a key policy driver, rather it is dependant upon the specific nature of coastline and associated objectives and is slightly intuitive.

Examples of a key driver may include:

- a power station which must be maintained, due to its national significance, (possibly only for a certain period of time if the facility is to be closed/decommissioned), or
- an internationally important habitat which relies on constant sediment feed, driving policy for the up-drift shoreline.

F2.2 METHODOLOGY

The Issues and Objectives Table (see [Appendix E](#)) was used to initially identify key policy drivers for the coast. The Client Steering Group (CSG) and then the Key Stakeholders and Elected Members were invited to review and comment ² at the November 2003 workshop and forum.

F2.3 KEY POLICY DRIVERS IDENTIFIED

From the workshop feedback ³ the following policy drivers were identified for each section of coast:

(a) *South Foreland to Hythe*

- Dover Harbour and Samphire Hoe were recognised as key drivers providing infrastructure of international importance.
- Folkestone was identified as an important asset and therefore denoted as a primary⁴ driver.
- The Network Rail (Southern Rail) link was recognised as a primary driver, as opposed to a key policy driver, but the weighting of this will vary with cliff stability and private funding.
- For the remaining sections of the coast (South Foreland, Shakespeare Cliff and Copt Point) the environmental benefits, and in particular the need for a naturally functioning coast, were recognised as important considerations.

² Refer to Appendix B (Summary Note)

³ Refer to Appendix B

⁴ Refer to Appendix E

(b) Hythe to Cliff End

- Dungeness Power Station was recognised as a key driver, its infrastructure being of critical national importance.
- Maintaining the navigation of the River Rother was also deemed as a key driver, as long as the Act⁵ remains in place
- Dungeness Foreland was identified as a single coherent 'flood cell' and therefore policy selection and implementation, along this section of the coast, should ideally be in unison.
- The socio-economic interests at Lydd and Hythe Ranges are a primary driver because of the importance of the ranges for military training.
- Dungeness SSSI and cSAC are primary drivers because a change in shoreline management practice is essential if the special scientific interest is to be restored in line with government policy

(c) Cliff End to Beachy Head

- The internationally designated environmental RAMSAR site, at Hooe and Pevensey Levels, was recognised as a key driver.
- The socio-economic assets at Hastings, Sovereign Harbour and Eastbourne also warrant protection and are therefore recognised as long-term key drivers.
- At Fairlight Cove a conflict was recognised between two identified key drivers: socio-economic assets of the cliff top community and environmental and landscape assets of the largely undefended cliffs and open coast.
- Bexhill was also identified as being socio-economically important, but not necessarily a key driver.

⁵ The Harbour at Rye Act (1801)

F3 Identification of Potential Policy Options

F3.1 METHODOLOGY

An initial brief review of all four generic Defra policy options was undertaken to determine which policies could be appropriate, considering not only the defined objectives but also their technical feasibility, and likely economic justification. In order to determine the latter, a broad assessment was made of assets potentially at risk using the baseline scenario 'No Active Intervention'. (This assessment used the mapping produced as part of the baseline scenario assessment).⁶ The possible benefits and opportunities arising from each policy option in relation to the objectives for a frontage were identified for each of the three epochs. This process allowed identification of those policy options that were viable for a particular feature and therefore taken forward for further scrutiny.

F3.2 CONCLUSIONS

The shoreline management policies considered for Policy Option Appraisal are those defined by Defra's Draft Procedural Guidance (2004):

- **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
- **No active intervention** - a decision not to invest in providing or maintaining defences.

⁶ Refer to Appendix C

F4 Policy Appraisal Tables

The following tables (4c01 to 4c30) summarise for each policy unit the broad, high-level appraisal of the policies undertaken to assess potential benefits of implementing a policy.

Note: At some locations (e.g. Rye Harbour to Cliff End), a change in policy to managed realignment or no active intervention, in the long-term, may potentially offer technical and/or environmental benefits, however its implementation would involve the loss of important environmental or anthropogenic assets. In these locations consideration of the long-term policy is presented for the 50-100 year time period. This reflects its consideration as a possible long-term goal, and also the barriers to promoting such an approach within the current legislative framework, whilst properties remain occupied and environmental site losses require compensation. This does not preclude the earlier implementation of the long-term policy if favourable conditions are achieved sooner.

SOUTH FORELAND TO DOVER (4C01)			
Summary description: An undefended section of chalk cliffs, forming part of Kent Downs AONB and South Foreland Heritage Coast, also part of Dover to Kingsdown SSSI, GCR and NCR sites for geological and habitat interests. The cliff top is largely undeveloped, including the coastal footpath and South Foreland lighthouse.			
Position of 'the line': Cliff top edge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Managed Realignment	No benefits, and potentially significant environmental impacts, would result from defending a set-back position.		
No Active Intervention	To be appraised. Will maintain the landscape and environmental value of the frontage.		

DOVER (4C02)			
Summary description: Dense urban area, with the coast dominated by the Port. The majority of this frontage is enclosed by the outer harbour breakwaters. Throughout the frontage developments extend to the cliff/shoreline edge. The town is of significant heritage importance, with its long military history including Dover Castle. There are also areas of local nature conservation importance within the urban area.			
Position of 'the line': Existing linear defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage.		
Advance the Line	No potential benefits have been identified, and potential environmental impacts would result from seaward movement of defences.		
Managed Realignment	No benefits, given that development extends to the cliff/beach edge throughout the frontage.		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of major port and significant area of urban development to erosion.		

SHAKESPEARE CLIFF (4C03)			
Summary description: An undefended section of chalk cliffs, forming part of Kent Downs AONB and Dover to Folkestone Heritage Coast, also part of Folkestone Warren SSSI for geological interests. The Dover to Folkestone railway line runs through the cliffs. The village of Aycliff is set slightly back from the cliff top; other assets include the coastal footpath and ventilation shafts for the railway line, with the A20 set slightly inland.			
Position of 'the line': Cliff top edge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		To be appraised. Potential risk to the railway tunnel in this time period (this will require a separate assessment).
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Managed Realignment	No benefits, and potential environmental impacts, would result from defending a set-back position in any particular time-period.		
No Active Intervention	To be appraised. Will maintain landscape and environmental value of frontage.		

SAMPHIRE HOE (4C04)			
Summary description: Platform created from the deposition of Eurotunnel spoil within a protective seawall. The site is now a significant recreational amenity as a Country Park following successful landscaping/vegetation of the site. The platform also includes critical infrastructure for the Eurotunnel including ventilation equipment. The Dover to Folkestone railway line runs along the cliff toe at the back of the site. The frontage is within the Kent Downs AONB and Dover to Folkestone Heritage Coast, with the cliffs also part of Folkestone Warren SSSI for their geological interests. The cliff top is largely undeveloped, including the coastal footpath, with the A20 set slightly inland.			
Position of 'the line': Existing linear defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the Eurotunnel infrastructure and other assets of the frontage.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not technically realistic to protect Eurotunnel infrastructure under this policy.		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of significant infrastructure.		

ABBOT'S CLIFF (4C05)			
Summary description: An undefended section of chalk cliffs, forming part of Kent Downs AONB and Dover to Folkestone Heritage Coast, also part of Folkestone Warren SSSI for geological interests. The Dover to Folkestone railway line runs through the cliffs. The cliff top is largely undeveloped, including the coastal footpath, with the A20 set slightly inland, and ventilation shafts for the railway line.			
Position of 'the line': Cliff top edge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		To be appraised. Potential risk to the railway tunnel in this time period.
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Managed Realignment	No benefits, and potential environmental impacts, would result from defending a set-back position in any particular time-period.		
No Active Intervention	To be appraised. Will maintain landscape and environmental value of frontage.		

FOLKESTONE WARREN (4C06)			
Summary description: Major landslide complex, designated a SSSI for both its geological and ecological importance. The toe of the landslide is heavily defended as the Dover to Folkestone rail line runs across the lower part of the landslide. The village of Capel-le-Ferne lies close to cliff top edge, with associated roads, etc. This frontage is also of heritage importance with numerous structures associated with WWII along the cliff top.			
Position of 'the line': Existing linear defences at slope toe.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not appropriate given extent of existing development within/behind landslide complex.	Not appropriate given extent of existing development within/behind landslide complex.	To be appraised for potential long-term technical and environmental benefits. Various realignment positions to be considered.
No Active Intervention	Not appropriate given extent of existing development within/behind landslide complex.	Not appropriate given extent of existing development within/behind landslide complex.	To be appraised for potential long-term technical and environmental benefits.

COPT POINT (4C07)			
Summary description: Area of cliff top open space, with edge of dense urban area set back.			
Position of 'the line': Cliff top edge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		To be appraised. Properties potentially at risk in this time period.
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Managed Realignment	No benefits, and potential environmental impacts, would result from defending a set-back position in any particular time-period.		
No Active Intervention	To be appraised. Will maintain landscape and environmental value of frontage.		

FOLKESTONE TO SANDGATE (4C08)			
Summary description: Dense urban area extending to edge of coastal slope and cliffs.			
Position of 'the line': Existing linear defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	No benefits, given that development extends to the cliff/beach edge over majority of the frontage.		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of significant area of urban development to erosion.		

SANDGATE TO HYTHE (4C09)			
Summary description: Low lying area including amenity space, Royal Military Canal and Hythe developments. Linked to Hythe flood area.			
Position of 'the line': Existing linear defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not appropriate given assets behind shoreline, also technically prohibitive (given low backing land).		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of significant area of urban development to flooding and erosion.		

HYTHE (4C09)			
Summary description: Dense urban development, fronted by amenity beach. Part of vast Dungeness flood risk area.			
Position of 'the line': Existing linear defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	No benefits, given that development extends to the beach edge throughout the frontage, also technically prohibitive (given low backing land).		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of significant area of urban development to flooding.		

HYPHE RANGES (4C010)			
Summary description: Largely undeveloped area backed by dense urban development, used by the MoD as a firing range. Part of vast Dungeness flood risk area.			
Position of 'the line': Landward edge of beach ridge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	To be appraised for potential long-term technical and environmental benefits. Various realignment positions to be considered.		
No Active Intervention	Limited potential process benefits and potential uncontrolled inundation of vast flood risk area.		

DYMCHURCH REDOUBT TO ROMNEY SANDS (4C011)			
Summary description: Low lying developments along much of coast, including areas of nature conservation importance. Backed by vast Dungeness flood risk area.			
Position of 'the line': Existing linear defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not appropriate given properties/road behind shoreline, also technically prohibitive (given low backing land).		
No Active Intervention	Limited potential process benefits and uncontrolled inundation of vast flood risk area.		

ROMNEY SANDS TO DUNGENESS POWER STATION (4C012)			
Summary description: Linear developments set back from accreting coastline of nature conservation importance.			
Position of 'the line': Seaward edge of Dungeness Road, The Pilot public house, Coast Drive and Greatstone-on-Sea developments.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from construction of defences seaward of present coast. Natural accretion does not constitute an 'advance' policy.		
Managed Realignment	Not relevant given that coast is accreting, also no potential benefits given that developments extend to edge of 'the line'.		
No Active Intervention	Limited potential process benefits and potential for uncontrolled inundation of vast flood risk area.		

DUNGENESS POWER STATION (4C013)			
Summary description: Two nuclear power stations at shoreline, protected by heavily managed shingle bund. Flood risk area backs power station complex.			
Position of 'the line': Seaward edge of power station complex.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the major infrastructure assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	No benefits, given that development extends to the beach edge over majority of the frontage.		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of urban development and important freshwater habitats.		

LYDD RANGES (4C014)			
Summary description: Largely undeveloped area, used by the MoD as a firing range. The area is of nature conservation importance.			
Position of ‘the line’: Landward edge of beach ridge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	To be appraised for potential long-term technical and environmental benefits. Various realignment positions to be considered.		
No Active Intervention	Process benefits but uncontrolled inundation of vast flood risk area.		

JURY’S GAP TO THE SUTTONS (4C015)			
Summary description: Low lying frontage backed by road and properties at Jury’s Gap. Backed by vast Dungeness flood risk area.			
Position of ‘the line’: Existing linear defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not appropriate given properties/road and environmental assets behind shoreline.	To be appraised for potential long-term technical and environmental benefits. Various realignment positions to be considered.	To be appraised for potential long-term technical and environmental benefits. Various realignment positions to be considered.
No Active Intervention	Limited potential process benefits and uncontrolled inundation of vast flood risk area.		

CAMBER SANDS (4C016)			
Summary description: Low lying village fronted by sand dunes of conservation importance. Backed by vast Dungeness flood risk area.			
Position of 'the line': Seaward edge of dunes (to account for developments in/on dunes).			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not appropriate given properties/road and environmental assets behind shoreline.		
No Active Intervention	Limited potential process benefits (if Rye Harbour terminal groyne is to remain) and uncontrolled loss of significant area of urban development to erosion and flooding.		

RYE HARBOUR (4C017)			
Summary description: Mouth of the River Rother, including harbour development, of nature conservation importance.			
Position of 'the line': Existing river defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area, and maintain navigation.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not appropriate given assets within flood risk area and potential impacts on navigation to Rye Harbour.		Partial removal of the terminal groyne to be appraised for potential long-term technical and environmental benefits.
No Active Intervention	Not appropriate given assets within flood risk area and potential impacts on navigation to Rye Harbour.		

RYE HARBOUR TO WINCHELSEA BEACH (4C018)			
Summary description: Largely undeveloped low lying area, including Rye Harbour, on west side of River Rother mouth, of nature conservation importance.			
Position of ‘the line’: Landward edge of beach ridge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	To be appraised. Will maintain conservation value of shoreline and protect flood risk assets.		
No Active Intervention	Not appropriate given assets within flood risk area.	Not appropriate given assets within flood risk area (see F.3.2. note).	To be appraised for potential long-term technical and environmental benefits.

WINCHELSEA BEACH TO CLIFF END (4C018)			
Summary description: Heavily managed barrier beach fronting, environmentally important, Pett Levels. Developments along/behind sections of the beach ridge.			
Position of ‘the line’: Existing linear defences.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not appropriate given properties/road and environmental assets behind shoreline.	Not appropriate given properties/road and environmental assets behind shoreline* (see note).	To be appraised for potential long-term technical and environmental benefits. Various realignment positions to be considered.
No Active Intervention	Not appropriate given properties/road and environmental assets within flood risk area.	Not appropriate given properties/road and environmental assets within flood risk area (see F.3.2.).	To be appraised for potential long-term technical and environmental benefits.

CLIFF END TO FAIRLIGHT COVE (4C019)			
Summary description: Area of landscape and environmental/geological importance, with no significant cliff top development.			
Position of ‘the line’: Cliff top edge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Managed Realignment	No benefits, and potentially significant environmental impacts, would result from defending a set-back position.		
No Active Intervention	To be appraised. Will maintain landscape and environmental value of frontage.		

FAIRLIGHT COVE EAST (SEA ROAD): (4C020)			
Summary description: Section of cliff top village fronted by environmentally important cliffs, with existing toe defence structure (rock bund).			
Position of ‘the line’: Cliff top edge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	Potentially significant environmental impacts would result from improving the current defence or building new defences.		
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Managed Realignment	To be appraised. Measures to reduce slope retreat in order to prolong life of cliff top assets.		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of residential developments.		To be appraised. Will improve landscape and environmental value of frontage.

FAIRLIGHT COVE CENTRAL (ROCKMEAD ROAD): (4C021)			
Summary description: Section of cliff top village fronted by active landslide complex. Environmentally important cliffs.			
Position of ‘the line’: Cliff top edge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the cliff top economic assets.		
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Managed Realignment	To be appraised. Measures to reduce slope retreat in order to prolong life of cliff top assets.		
No Active Intervention	To be appraised. Will maintain landscape and environmental value of frontage.		

FAIRLIGHT COVE WEST (4C022)			
Summary description: Section of village set back from environmentally important cliff top.			
Position of ‘the line’: Cliff top edge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		To be appraised. Properties potentially at risk in this time period.
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.		
Managed Realignment	No benefits, and potentially significant environmental impacts, would result from defending a set-back position in any particular time-period.		
No Active Intervention	To be appraised. Will maintain landscape and environmental value of frontage.		

FAIRLIGHT WEST TO HASTINGS CLIFFS (4C023)		
Summary description: Area of landscape and environmental/geological importance, with no cliff top development.		
Position of 'the line': Cliff top edge.		
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.	Years 50 – 100 (2105)
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.	
Managed Realignment	No benefits, and potentially significant environmental impacts, would result from defending a set-back position.	
No Active Intervention	To be appraised. Will maintain landscape and environmental value of frontage.	

HASTINGS (4C024)		
Summary description: Dense urban development to edge of low coastal slope, shingle beach of amenity importance.		
Position of 'the line': Existing linear defences.		
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)
Hold the Line	To be appraised. Will protect the economic assets of the frontage.	Years 50 – 100 (2105)
Advance the Line	To be appraised. Will protect the economic assets of the frontage. Consideration will be given to implementation without harbour breakwaters.	
Managed Realignment	No benefits, and potential environmental impacts, would result from seaward movement of defences.	
No Active Intervention	No benefits, given that development extends to the cliff/beach edge over majority of the frontage.	
	Limited potential process benefits, and uncontrolled loss of significant area of urban development to erosion.	

BULVERHYTHE AND GLYNE GAP (4C025)

Summary description: Largely low-lying developed frontage backed by the Coombe Haven Valley, which is of environmental importance.

Position of ‘the line’: Cliff top edge on cliffed section and front of developed area (including rail line) on low sections.

Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing freshwater habitats.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	No benefits, given that development extends to the beach edge over majority of the frontage.		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of urban development and important freshwater habitats.		

BEXHILL TO COODEN (4C026)

Summary description: Dense urban areas extending to edge of low cliffs and beach.

Position of ‘the line’: Existing linear defences.

Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	No benefits, given that development extends to the cliff/beach edge over majority of the frontage.		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of significant area of urban development to erosion.		

PEVENSEY LEVELS (4C027)			
Summary description: Heavily managed barrier beach fronting, environmentally important, Pevensey Levels. Developments along/behind sections of the beach ridge also scattered development and infrastructure in the Levels.			
Position of 'the line': Landward edge of beach ridge/front of properties on beach crest.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	Not appropriate given extent of existing development along coastline.	Not appropriate given extent of existing development along coastline* (see note).	To be appraised for potential long-term technical and environmental benefits. Various realignment positions to be considered.
No Active Intervention	Not appropriate given extent of existing development along coastline.	Not appropriate given extent of existing development along coastline* (see note).	To be appraised for potential long-term technical and environmental benefits.

SOVEREIGN HARBOUR (4C028)			
Summary description: Major marina development extending to beach edge, within flood risk area.			
Position of 'the line': Landward edge of beach ridge.			
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055)	Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.		
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.		
Managed Realignment	No benefits, given that development extends to the beach edge.		
No Active Intervention	Limited potential process benefits, and uncontrolled loss of significant area of urban development to flooding and erosion.		

EASTBOURNE (4C029)		
Summary description: Dense urban development with cliffed and low-lying sections, fronted by popular tourist beach.		
Position of ‘the line’: Cliff top edge on cliffed section and existing linear defences on low section.		
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055) Years 50 – 100 (2105)
Hold the Line	To be appraised. Will protect the economic assets of the frontage and backing flood risk area.	
Advance the Line	No benefits, and potential environmental impacts, would result from seaward movement of defences.	
Managed Realignment	No benefits, given that development extends to the cliff/beach edge over majority of the frontage.	
No Active Intervention	Limited potential process benefits, and uncontrolled loss of significant area of urban development to flooding and erosion.	

BEACHY HEAD (4C030)		
Summary description: Internationally important landmark site, included in South Downs AONB and Heritage Coast. Also designated SSSI for its geological and habitat importance. The cliff top is largely undeveloped, with scattered properties.		
Position of ‘the line’: Cliff top edge.		
Policy	Years 0 – 20 (2025)	Years 20 – 50 (2055) Years 50 – 100 (2105)
Hold the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.	
Advance the Line	No benefits, and potentially significant environmental impacts, would result from providing new defences.	
Managed Realignment	No benefits, and potentially significant environmental impacts, would result from defending a set-back position.	
No Active Intervention	To be appraised. Will maintain landscape and environmental value of frontage.	

F5 Development of Policy Scenarios for Assessment

F5.1 INTRODUCTION

Due to the very strong sediment linkages and interdependencies along this coast it is appropriate to assess the coast as a whole, rather than a number of discrete sections of coast. Therefore, using the broad-level assessment of the Defra generic policies, policy scenarios were developed which combined policy options along the various sections of the shoreline, Tables 4c01 to 4c30 (Section F3) illustrate this and highlight the option(s) that were to be reviewed, from which the proposed policy was ascertained.

From the Key Stakeholders Meeting (13/11/03) and further meetings with English Nature, the Environment Agency (20/01/2004) and local authority planners, it was agreed that there were certain key economic and social drivers that influence future SMP policy and these warrant protection under the current framework, and any future changes to the framework, they are:

- Dover Harbour,
- Dungeness Power Stations,
- Large Conurbations (General discussions did not define what may be considered a 'large conurbation', however, the larger settlements on this frontage include: Eastbourne, Bexhill, Hastings, Folkestone and Dover),
- Samphire Hoe (Channel Tunnel Link).

These drivers are likely to warrant protection throughout the next 100 years, and as such will provide our Filter 1 policies. Discussions with the Key Stakeholders Forum and Elected Members Forum confirmed that the agreed approach, for the key drivers was 'Hold the Line'. The aim of this long-term 'hold' policy at these locations, is to protect the key assets of the frontage, and does not necessarily rule out some localised realignment to provide a more sustainable defence alignment in the future (how such a policy is ultimately defined is not applicable at this stage). The key features/locations where it is proposed only one long-term policy be considered are (see Table F.4 over):

Location	Policy
South Foreland to Dover	NAI
Dover Harbour	Hold
Shakespeare Cliff	NAI
Samphire Hoe	Hold
Abbots Cliff	NAI
Folkestone	Hold
Dungeness Power Stations	Hold
Fairlight to Hastings	NAI

Location	Policy
Hastings	Hold
Bexhill	Hold
Eastbourne	Hold
Beachy Head to Eastbourne	NAI

Table F.4: Locations where only one long-term policy was proposed

F5.2 POLICY SCENARIOS TO APPRAISE AT FILTER 2

The development of the Filter 1 scenarios was based upon technical, socio-economic and environmental benefits. To develop the policies further the Beachy Head to South Foreland frontage can be sub-divided into a number of frontages each of which can be considered discrete from adjacent frontages. For the purpose of Filter 2 policy scenario development the following frontages will be considered:

- Dover to Folkestone
- Hythe to Camber
- Rye Harbour to Cliff End
- Cliff End to Hastings
- Hastings to Bexhill
- Bexhill to Sovereign Harbour

In order to sensibly assess potential shoreline response for each of the proposed scenarios, assumptions regarding the *likely* implementation measures that would be used to achieve these policies were made. The outcome of this process was reviewed by the Client Steering Group (CSG), the Elected Members (EMF) and the Key Stakeholders (KSF), collectively their feedback was that the present management practice should, for the vast majority of frontages, continue in the short-term i.e. the 0 to 20 year epoch).

The following tables define the scenarios to be appraised for each of the frontages considered at Filter 2 stage. These scenarios are described in terms of the assumed defence approach, rather than the policy, as the latter can be ambiguous when appraising coastal evolution/linkages. The assumed defence approach may alter with time (e.g. not the same as current management) as it is anticipated that some practises may become ineffective or unsustainable, on specific frontages, for example, groynes may become redundant or recharge could cease to exist due to limited, or no, beach material being present.

F5.3 DOVER TO FOLKESTONE

The scenarios to be appraised for this frontage are as follows:

Scenario 1: Dover to Folkestone (<u>Hold</u>)			
Location	0-20	20-50	50-100
Shakespeare Cliffs	No defences	No defences	Toe protection
Samphire Hoe	Seawall, block/rock revetment, rock armour	Seawall, block/rock revetment, rock armour	Seawall, block/rock revetment, rock armour
Abbot's Cliff	No defences	No defences	Toe protection
Folkestone Warren	Sea wall, apron and timber groynes	Sea wall, apron and timber groynes	Sea wall, apron and timber groynes
Copt Point	No defences	No defences	Toe protection and Slope stabilisation (to protect threatened developments)

Scenario 2: Dover to Folkestone (<u>No Active Intervention</u>)			
Location	0-20	20-50	50-100
Shakespeare Cliffs	No defences	No defences	No defences
Abbot's Cliff	No defences	No defences	No defences
Folkestone Warren	Sea wall, apron and timber groynes	Sea wall, apron and timber groynes	No defences
Copt Point	No defences	No defences	No defences

F5.4 HYPHE TO RYE HARBOUR

The scenarios to be appraised for this frontage are as follows:

Scenario 1: Hythe to Rye Harbour (No Active Intervention)			
Location	0-20	20-50	50-100
Hythe east (Royal Military Canal Frontage)	Seawall, promenade, rock groynes	Retired defence line, groynes and seawalls allowed to fail	No defences / management
Hythe	Seawall, promenade, rock groynes	Seawall, promenade, rock groynes	No defences / management
Hythe Ranges	Rock revetment	Rock revetment	No defences / management
Littlestone-on-Sea to Dymchurch Redoubt	Timber groynes, seawall, promenade, beach re-nourishment	Timber groynes, seawall, promenade, beach re-nourishment	No defences / management
Dungeness to Greatstone-on-Sea	No defences	No defences	No defences
Dungeness Power Station	Mechanically profiled and nourished shingle bund	Mechanically profiled and nourished shingle bund	Mechanically profiled and nourished shingle bund, possible hard structures
Lydd Ranges	Secondary defence line at Green Wall. No beach management	Secondary defence line at Green Wall. No beach management	No defences / management
The Suttons to Jury's Gap	Timber Groynes, recycling, seawall sections	Timber Groynes, recycling, seawall sections	No defences / management
Camber Sands	Dune management	Dune management	No management

Scenario 2: Hythe to Rye Harbour (<u>Managed Realignment</u>)			
Location	0-20	20-50	50-100
Hythe east (Military Canal Frontage)	Seawall, promenade, rock groyne	Seawall, promenade, rock groyne	Seawall, promenade, rock groyne
Hythe	Seawall, promenade, rock groyne	Seawall, promenade, rock groyne	Seawall, promenade, rock groyne
Hythe Ranges	Rock revetment	Retired defence line, with the failure of the revetment	Increasing failure of revetment
Littlestone-on-Sea to Dymchurch Redoubt	Timber groyne, seawall, promenade, beach nourishment	Timber groyne, seawall, promenade, beach nourishment	Timber groyne, seawall, promenade, beach nourishment
Dungeness to Greatstone-on- Sea	No defences	No defences	No defences
Dungeness Power Station	Mechanically profiled and nourished shingle bund	Mechanically profiled and nourished shingle bund	Mechanically profiled and nourished shingle bund, possible hard structures
Lydd Ranges	Secondary defence line at Green Wall. No beach management	Some failure of the secondary defence line (the Green Wall)	Further failure of the secondary defence line (Green Wall)
The Suttons to Jury's Gap	Timber Groyne, recycling, seawall sections	Maintain Camber practises; construct retired defence line, groyne and seawall, east of Camber, allowed to fail	Maintain retired defence line
Camber Sands	Dune management	Dune management	Dune management

F5.5 RYE HARBOUR TO CLIFF END

The scenarios to be appraised for this frontage are as follows:

Scenario 1: Rye Harbour to Cliff End (<u>Hold</u>)			
Location	0-20	20-50	50-100
Rye Harbour	Rye harbour terminal groyne and east pier training wall	Rye harbour terminal groyne and east pier training wall	Rye harbour terminal groyne and east pier training wall.
Rye Harbour to Winchelsea Beach	No defences (existing secondary defence)	No defences (existing secondary defence)	No defences (existing secondary defence)
Winchelsea Beach to Cliff End	Seawall, timber groynes and beach recycling/recharge	Seawall, groynes, beach recycling/recharge	Seawall, groynes, beach recycling/recharge

Scenario 2: Rye Harbour to Cliff End (<u>Managed Realignment</u>)			
Location	0-20	20-50	50-100
Rye Harbour	Rye harbour terminal groyne and east pier training wall	Rye harbour terminal groyne and east pier training wall. Shingle recycling to Broomhill Sands	Partial failure of the terminal groyne but river training walls maintained. Continued shingle recycling to Broomhill Sands
Rye Harbour to Winchelsea Beach	No defences (existing secondary defence)	No defences (existing secondary defence)	No defences (existing secondary defence)
Winchelsea Beach to Cliff End	Seawall, timber groynes and beach recycling/recharge	Foreshore defences allowed to fail, beach management ceases. Secondary defences constructed (to limit flood propagation)	Secondary defences

Scenario 3: Rye Harbour to Cliff End (No Active Intervention)			
Location	0-20	20-50	50-100
Rye Harbour	Rye harbour terminal groyne and east pier training wall	Rye harbour terminal groyne and east pier training wall	Failure of terminal groyne and river training walls
Rye Harbour to Winchelsea Beach	No defences (existing secondary defence)	No defences (existing secondary defence)	Secondary defences allowed to fail
Winchelsea Beach to Cliff End	Seawall, timber groynes and beach recycling/recharge	Foreshore defences allowed to fail, beach management ceases. Secondary defences constructed (to limit flood propagation)	Secondary defences allowed to fail

F5.6 CLIFF END TO HASTINGS

The scenarios to be appraised for this frontage are as follows:

Scenario 1: Cliff End to Hastings (No Active Intervention)			
Location	0-20	20-50	50-100
Cliff End to Fairlight Cove	No defences	No defences	No defences
Fairlight Cove East	Rock bund at toe of the cliffs	Gradual deterioration of the bund	Gradual deterioration of the bund
Fairlight Cove Central	No defences	No defences	No defences
Fairlight West	No defences	No defences	No defences
Fairlight Village to Hastings Cliffs	No defences	No defences	No defences

Scenario 2: Cliff End to Hastings (<u>Managed Realignment</u>)			
Location	0-20	20-50	50-100
Cliff End to Fairlight Cove	No defences	No defences	No defences
Fairlight Cove East	Rock bund at toe of the cliffs	Rock bund at toe of the cliffs	Gradual deterioration of the bund
Fairlight Cove Central	Rock bund at toe of cliff and slope stabilisation	Rock bund at toe of cliff and stabilisation	Gradual deterioration/removal of bund
Fairlight Cove West to Hastings Cliffs	No defences	No defences	No defences

F5.7 HASTINGS TO BEXHILL

The scenarios to be appraised for this frontage are as follows:

Scenario 1: Hastings to Bexhill (<u>Hold</u>)			
Location	0-20	20-50	50-100
Hastings	Groynes and sea wall	Groynes and sea wall	Groynes and sea wall
Bulverhythe	Timber groynes and sea wall. Rock toe bund located in front of the clay cliffs	Timber groynes and sea wall. Rock toe bund located in front of the clay cliffs	Timber groynes and sea wall. Rock toe bund located in front of the clay cliffs
Glyne Gap	Timber groynes and sea wall	Timber groynes and sea wall	Timber groynes and sea wall
Bexhill	Timber groynes and sea wall up to Galley Hill	Timber groynes and sea wall up to Galley Hill	Timber groynes and sea wall up to Galley Hill

F5.8 BEXHILL TO SOVEREIGN HARBOUR

The scenarios to be appraised for this frontage are as follows:

Scenario 1: Bexhill to Sovereign Harbour (Hold)			
Location	0-20	20-50	50-100
Cooden to Normans Bay	Timber groynes and beach recycling (plus seawall sections)	Timber groynes and beach recycling (plus seawall sections)	Higher groynes, increased recycling/recharge, possible rock armour in front of developments
Normans Bay (Martello Tower) to Sovereign Harbour	Timber groynes and beach recycling (plus seawall sections)	Timber groynes and beach recycling (plus seawall sections)	Higher groynes, increased recycling/recharge, possible rock armour in front of developments

Scenario 2: Bexhill to Sovereign Harbour (Managed Realignment: to the rail line)			
Location	0-20	20-50	50-100
Cooden to Normans Bay	Timber groynes and beach recycling (plus seawall sections)	Timber groynes and beach recycling (plus seawall sections)	Construct defences at rail line. Allow coast to realign to rail line
Normans Bay (Martello Tower) to Sovereign Harbour	Timber groynes and beach recycling (plus seawall sections)	Timber groynes and beach recycling (plus seawall sections)	Construction of secondary defence line at rail line. Deterioration and failure of existing