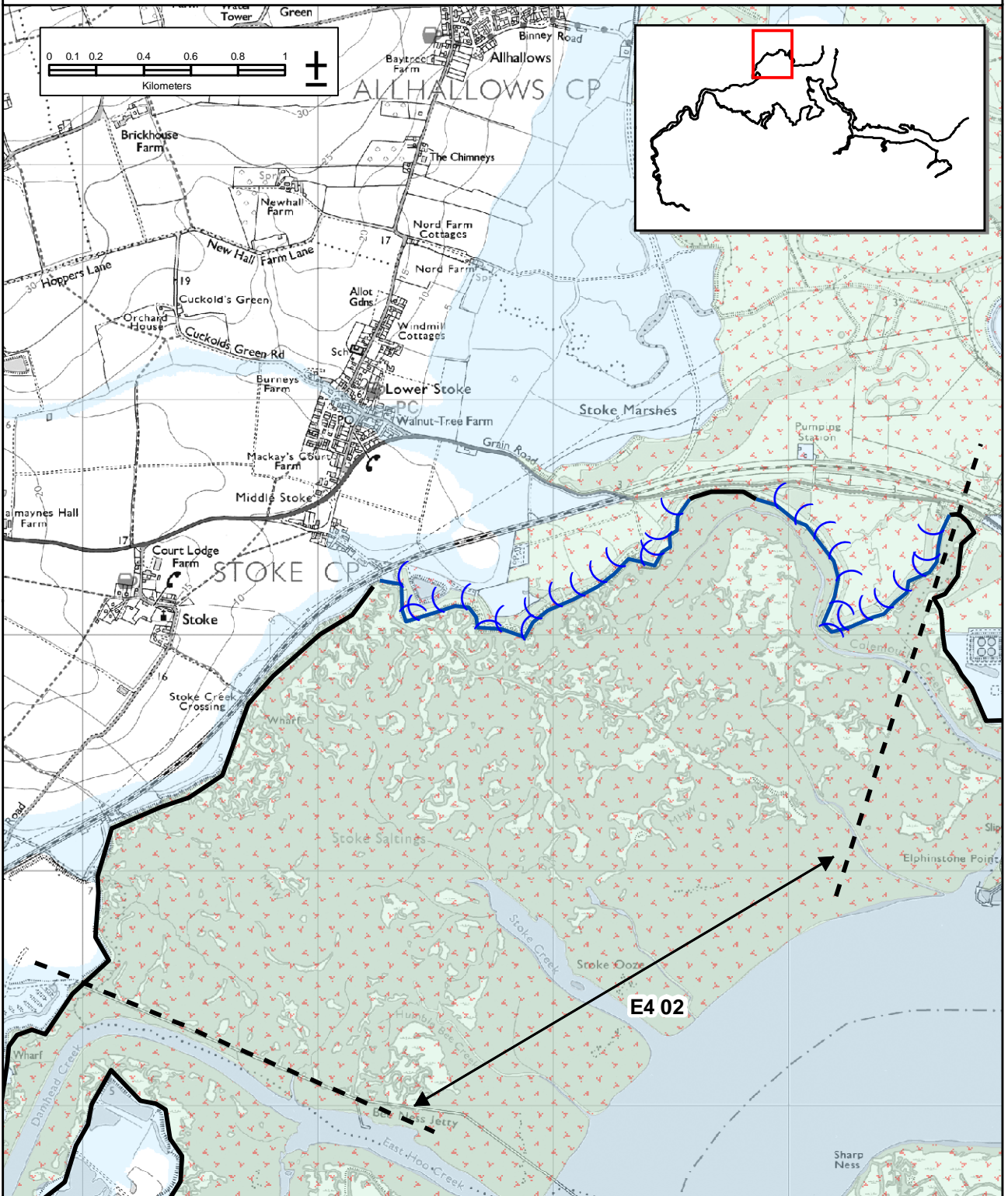





Medway Estuary and Swale Shoreline Management Plan


Policy Unit E4 02: Colemouth Creek to Bee Ness Jetty



Policy

From Present Day:	Medium-Term:	Long-Term:
Managed Realignment with localised Hold the Line	Managed Realignment with localised Hold the Line	Managed Realignment with localised Hold the Line


-  Indicative erosion zone up to 2025
-  Indicative erosion zone up to 2055
-  Indicative erosion zone up to 2105

 Indicative realignment location*

* Actual realignment extent and location will be the subject of further studies.


 Policy Unit Boundary

 Policy Unit Extent

 Current shoreline

 Hold the Line

Environmental/Cultural Heritage

-  National Nature Conservation Designation
-  International Nature Conservation Designation
-  Important Heritage Sites (Scheduled Monuments)
-  2005 Indicative floodplain © Environment Agency

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Location reference:	Colemouth Creek to Bee Ness Jetty
Policy Unit reference:	E4 02

SUMMARY OF THE PLAN AND JUSTIFICATION

Plan:

Nationally important infrastructure (road, railway, pipelines and electricity cables) associated with industry on the Isle of Grain (Policy Unit E4 01), is located close to the shoreline along the length of this frontage. The residential communities of Lower Stoke and Middle Stoke primarily lie on higher land; however, some areas are vulnerable to flooding. The estuary is wider than the ideal form in this location and consequently a large area of saltmarsh (Stoke Saltings) continues to develop between Colemouth Creek and the Bee Ness Jetty. The intertidal area and some sections of freshwater habitat bounding this unit are internationally designated for their ecological importance. The growth of intertidal habitat in this policy unit is very important in maintaining the internationally designated habitat.

The recommended long-term plan is to allow the shoreline to realign to a more naturally functioning system where possible, creating brackish and saline habitat in some locations, whilst continuing to provide appropriate flood and erosion defence to the nationally important infrastructure crossing the floodplain and most of the defended hinterland. This section of shoreline provides a resource of growing intertidal habitat and is an ideal location for environmental enhancements and habitat creation through localised managed realignments.

No specific realignment positions have been identified for the SMP. The potential impact on internationally designated sites will be a limiting factor on realignment extents and therefore, further studies will be required to investigate and define the extent, location and implementation of the realignment i.e. the best technical, environmental and economic option that best manages flood risk. These studies will also need to investigate the exact standard and alignment of any defences for this frontage and any mitigation measures required for loss of designated habitat.

The future management of this unit will work towards achieving a more naturally functioning estuary and the creation of important brackish and saline habitats whilst controlling coastal flooding and erosion to key assets and, at the same time, creating a more economically and technically viable shoreline position.

Should current sea level rise predications be realised, a further realignment to align with the Isle of Grain to South Foreland SMP2 Policy Unit 4a01 in the last epoch may enable better estuary management. Any proposals for land use change, new development and infrastructure provision or replacement should be designed to take account of possible larger realignment of the estuary across the coastal plain in the 3rd epoch.

The effect of these policies on designated conservation sites has been assessed in partnership with Natural England.

The above provides the local details in respect of the SMP-wide Plan; therefore the above must be read in the context of the wider-scale issues and policy implications, as presented in the preceding sections and Appendices to this Plan document.

Location reference: Colemouth Creek to Bee Ness Jetty

Policy Unit reference: E4 02

Preferred policies to implement Plan:

From present day: The present day policy is managed realignment with localised hold the line for Colemouth Creek to Bee Ness Jetty. This will be implemented by maintaining the current defence line along the part of the frontage and by constructing new realigned secondary defences in localised areas at a set-back position, ensuring continued protection to infrastructure. Some shoreline paths would have to be re-routed in localised areas.

No specific realignment positions have been identified for the SMP, however realigned defences will be shorter in length than current defences and so be more economically viable and sustainable in the longer term. However, set back may affect small areas of designated freshwater habitat, dependant on realignment extents. The effect on freshwater habitats would require mitigation / compensation measures to be implemented, and this aspect will require more detailed appraisal.

The evolution of intertidal areas will be dependant on sediment supply. It is predicted that intertidal areas will continue to experience net accretion as sediment supply is expected to be able to meet demand throughout this epoch.

Medium-term: The medium term policy is to continue allowing the shoreline to evolve naturally in sections, whilst continuing to provide protection to infrastructure and low lying areas, under a policy of **managed realignment with localised hold the line**. Defences will require further maintenance throughout this period as sea levels rise. However, the increased saltmarsh and intertidal area, in sections where defences are set-back, will afford added protection to the hinterland and reduce maintenance costs to the set back defences. Environmental transitions will be prominent during this epoch as brackish and intertidal habitats replace some of the freshwater interests. This may require specific management to maximise the environment benefits and limit any potentially negative habitat impacts.

It is predicted that intertidal areas will continue to experience net accretion as sediment supply is expected to be able to meet demand throughout this epoch. However, erosion may become more prevalent along the seaward edge of the saltmarshes as sea levels rise.

Long-term: The long-term policy is a continuation of **managed realignment with localised hold the line**, to enable more flexible and sustainable flood and erosion risk

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Location reference: **Colemouth Creek to Bee Ness Jetty**

Policy Unit reference: **E4 02**

management within the estuary. All defences will require periodic maintenance and potential upgrading with sea level rise. Should current sea level rise predications be realised, a further realignment to align with the Isle of Grain to South Foreland SMP2 Policy Unit 4a01 may enable better estuary management. Any proposals for land use change, new development and infrastructure provision or replacement should be designed to take account of possible larger realignment of the estuary across the coastal plain in the 3rd epoch.

It is expected that created habitat in realigned areas will become well-established during this epoch and provide added protection to the hinterland. However, elsewhere coastal squeeze may become more prevalent as sea levels rise and sediment supply in the Medway decreases over this epoch.

Location reference: *Colemouth Creek to Bee Ness Jetty*

Policy Unit reference: *E4 02*

IMPLICATIONS OF THE PLAN FOR THIS LOCATION

Time Period	Management Activities	Material Assets, Infrastructure & Land Use	Landscape	Natural Environment	Historic Environment	Population (Amenity & Recreational Use and Human Health)
0-20 years	Undertake engineering works to defences to Hold the Line of sections of defences that protect key assets and construct secondary defences in suitable locations.	Defences will continue to provide the appropriate level of protection to infrastructure and most areas of agricultural land Areas of Grade 4 land affected by managed realignment will become intertidal. Any proposals for changes in land use and new or replacement assets should be designed to account for larger change in the third epoch.	Designated estuary landscape will be maintained however some features will change through Realignment.	No net loss of internationally designated intertidal habitats and nationally important (BAP) habitat. However, due to coastal squeeze, loss will occur in some areas as will accretion elsewhere. Creation of internationally and nationally important saltmarsh habitat. Effect on small areas of internationally designated coastal grazing marsh and nationally important (BAP) habitat, dependant on realignment extent. Compensatory habitat will need to be secured before any designated habitat is lost.	Potential loss of buried unknown heritage.	Re-routing of footpaths where MR is implemented.
20-50 years	Undertake engineering works to defences to Hold the Line of sections of defences protecting key assets. Construct	Defences will continue to minimise the coastal erosion and flood risk to built assets, infrastructure and most areas of agricultural land	Designated estuary landscape will be maintained, potential for visual enhancement with a more natural coastline as MR is established.	No net loss of internationally designated intertidal habitats and nationally important (BAP) habitat. However, due to coastal squeeze, loss will occur in some areas as will accretion elsewhere. Establishment of realigned saline	Potential loss of buried unknown heritage.	Potential loss of wharf and Medway Micro Lights if defences realigned in these locations. Re-routing of footpaths where MR is implemented.

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Location reference: *Colemouth Creek to Bee Ness Jetty*

Policy Unit reference: *E4 02*

IMPLICATIONS OF THE PLAN FOR THIS LOCATION

Time Period	Management Activities	Material Assets, Infrastructure & Land Use	Landscape	Natural Environment	Historic Environment	Population (Amenity & Recreational Use and Human Health)
	secondary defences in suitable realignment locations	Potential of further loss of land if defences realigned further.		habitat. Potential further affect on internationally designated coastal grazing marsh and nationally important (BAP) habitat, if defences realigned further.		
50-100 years	Undertake engineering works to defences to Hold the Line of sections of defences protecting key assets. Construct secondary defences in suitable realignment locations.	Defences will continue to minimise the coastal erosion and flood risk to built assets, infrastructure and most areas of agricultural land Potential of further loss of land if defences realigned further.	Designated estuary landscape will be maintained, potential for visual enhancement with a more natural coastline as MR is established.	Potential effect on internationally designated intertidal habitats and nationally important (BAP) habitat with coastal squeeze, as sediment supply decreases in the estuary. Establishment of habitat in realigned areas. Potential further effect on internationally designated coastal grazing marsh and nationally important (BAP) habitat, if defences realigned further.	Potential loss of buried unknown heritage.	Potential loss of wharf and Medway Micro Lights if defences realigned in these locations. Re-routing of footpaths where MR is implemented.

The above provides the local details in respect of the SMP-wide Plan; therefore the above must be read in the context of the wider-scale issues and policy implications, as presented in the preceding sections and Appendices to this Plan document.