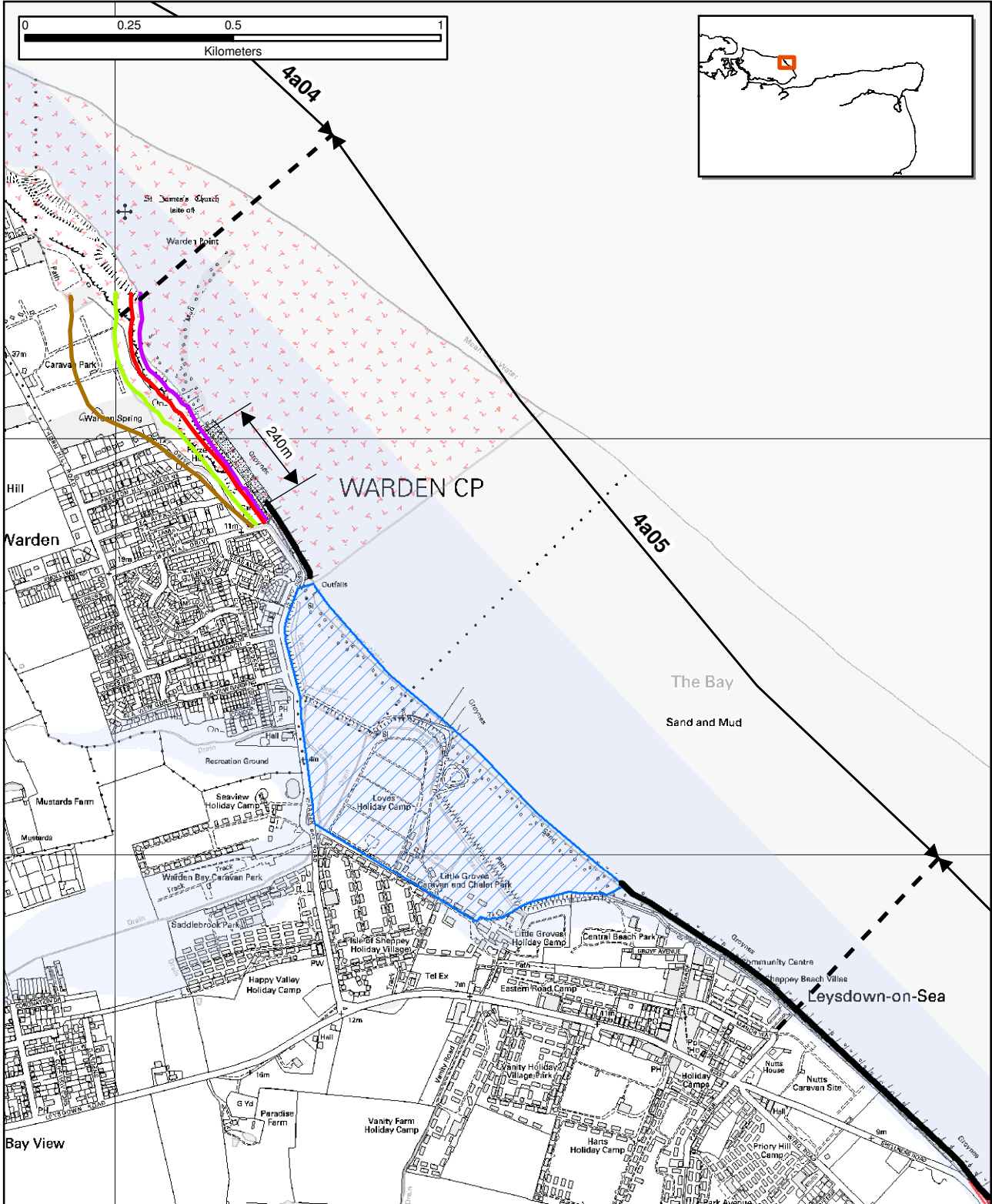


Isle of Grain to South Foreland Shoreline Management Plan Policy Unit 4a 05: Warden Bay to Leysdown-on-Sea - Map 1



Policy

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

Erosion Lines

- 0-20 year erosion
- 20-50 year erosion
- 50-100 year erosion
- 0-100 year (HTL)
- - - Policy Unit Boundary
- Current shoreline

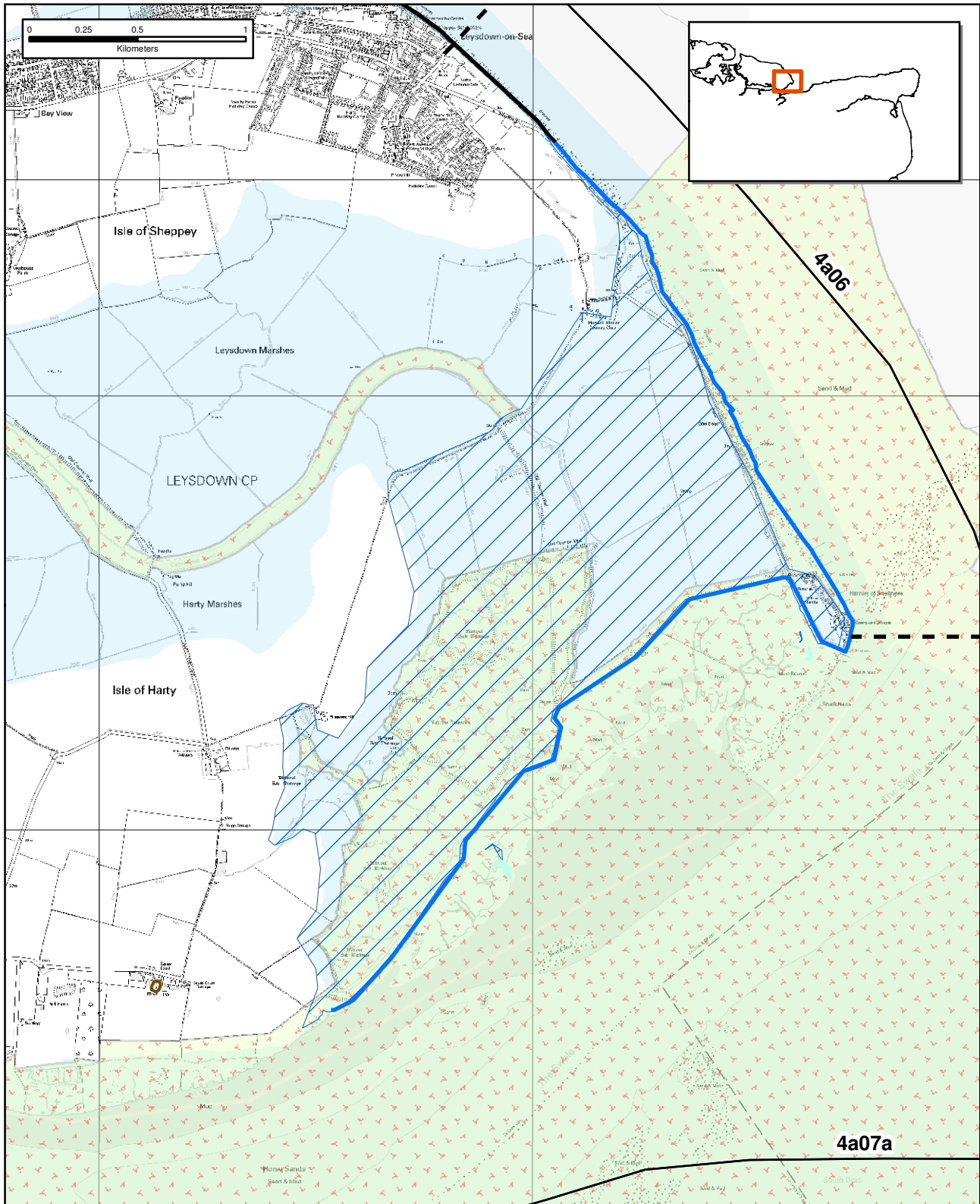
- Indicative Realignment Extent
- Proposed coastal protection works (Bund, crest level >5.04m AOD)
- 2005 Indicative floodplain © Environment Agency

Environmental/Cultural Heritage

- National Nature Conservation Designation
- International and National Nature Conservation Designation




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
Isle of Grain to South Foreland Shoreline Management Plan Policy Unit 4a 06: Leysdown on Sea to Shell Ness - Map 1






Policy

From Present Day:	Medium-Term:	Long-Term:
Managed Realignment	Managed Realignment	Managed Realignment

-  Hold the Line (0-100 years)
-  Policy Unit Boundary
-  Current Shoreline

-  Indicative realignment extent
-  2005 Indicative floodplain © Environment Agency

Environmental/Cultural Heritage

-  National Nature Conservation Designation
-  International and National Nature Conservation Designation
-  Important Heritage Sites (Scheduled Monuments)

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Location reference:	Leysdown-on-Sea to Shell Ness
Policy Unit reference:	4a06

SUMMARY OF THE PLAN AND JUSTIFICATION

Plan:

The frontage comprises a managed sand (and shell) beach, which is backed by low-lying coastal grazing marsh. Under rising sea levels it is anticipated that it will become increasingly difficult to maintain a beach along this frontage. If the current alignment were to be held in the long-term, coastal squeeze, together with a diminished supply of natural beach building sediment would lead to the need for substantial hard defences and / or significant beach management. Managed realignment would avoid the need for such substantial work, possibly creating cost savings and environmental enhancements.

No specific realignment 'line' has been defined but an indicative extent has been identified (see map), which is subject to further studies. 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, as well as to investigate the exact standard and alignment of any defences for this frontage and any mitigation measures required for loss of designated habitat.

Realignment along this section of the coast would require flood risk management, whilst a set back here would involve the loss of built assets; nominally the houses at Shell Ness, some agricultural land as well as freshwater habitats. Realignment would however, create a coast that will not require ever increasing expenditure to maintain in the coming centuries, negate the effects of coastal squeeze and create important brackish and saline habitats. (The loss of the designated freshwater habitats would normally require mitigation measures to be implemented – and this aspect will require a more detailed appraisal in the strategy study). Managed realignment will also potentially result in the loss of buried unknown heritage.

This frontage marks the interface between the open coast and estuary SMPs. As such a holistic approach between open coast and estuarine processes needs to be implemented. The management of this frontage is consistent with the estuary SMP policy unit (Policy Unit E4 25: Shell Ness to Sayes Court – Medway Estuary and Swale SMP SMP. The preferred policy for the estuary frontage is Managed Realignment for all three epochs), which also proposes managed realignment for all three

This policy is considered to be sustainable in the long-term, on the basis that environmental, engineering and inter-tidal benefits will be realised and that the overall flood defence is maintained to limit flood propagation.

Preferred policies to implement Plan:

From present day: If the socio-economic, environmental and technical benefits are confirmed, then it will be appropriate to implement a change of policy, at Leysdown-on-Sea to Shell Ness, to **managed realignment**. Realignment along this section of the coast would require flood risk management. To reduce large scale inundation, it is possible that new defence structures will need to be constructed, at a set-back position, prior to allowing the existing shoreline defence structures to fail.

During this epoch it is unlikely that there will be a significant change between the present day dynamics on the open coast and those within the Swale Estuary. However, it is acknowledged that the hamlet of Shellness will become

Location reference: Leysdown-on-Sea to Shell Ness

Policy Unit reference: 4a06

increasingly vulnerable to wave attack.

Medium-term: The medium-term policy is to continue to allow the coastline to respond to changes in the forcing factors albeit it in a proactive manner, under a policy of **managed realignment**. Any realigned flood defence structures will require maintenance throughout this period. It is envisaged that environmental transitions will be prominent during this epoch, as brackish and inter-tidal habitats replace some of the freshwater interests. This transition may require specific management intervention to maximise the environment benefits and limit potential habitat impacts.

During this epoch it is proposed that the open coast and the hamlet of Shellness will become increasingly vulnerable to sea level rise, potentially experiencing a number of breaches. As such the managed loss of assets close to the current coast would be required. There is also the potential that the durability of Shell Ness spit could reduce, due to a potential reduction in feed (from offshore) and the predicted rise in sea level. It is anticipated that the inter-dependency between the open coast and estuary will increase during this epoch.

Long-term: The long-term policy is to continue allowing the coastline to realign, albeit in a controlled manner, under a policy of **managed realignment**. This will enable a more flexible and sustainable flood and erosion risk management for this section of the open coast (as well as the outer reaches of the Swale Estuary; Shell Ness to Sayes Court). With sea level rise predicted to accelerate during this epoch it is envisaged that the dynamics on the open coast and between the open coast and the Swale Estuary will undergo change.

On the open coast more frequent breaching is predicted and it is likely that the durability of Shell Ness spit will continue to reduce, due to sea level rise and uncertainty regarding feed. As such, it is envisaged that the northern shore of the Swale will realign landwards and the mouth will widen. This would result in the southern shore of the Swale and open coast at Faversham becoming increasingly susceptible to open coast conditions.

Further maintenance of any realigned flood defence structures will be required during this epoch.

Location reference:	Leysdown-on-Sea to Shell Ness
Policy Unit reference:	4a06

IMPLICATIONS OF THE PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Built Assets and Land Use	Landscape	Nature Conservation	Historic Environment	Amenity and Recreational Use
2025	Construct of realigned defences and allow the failure of existing shoreline structures.	Residential and commercial properties may be at risk in this period.	The current landscape and land use will alter, giving way to a transgressed shoreline and inter-tidal area.	Current nature conservation interests maintained. Compensatory habitat will need to be secured before any designated habitat is lost.	No significant heritage assets present. Some unknown heritage assets may be exposed / lost.	Current amenity and recreational facilities will change i.e. potential for green tourism, as new habitats develop.
2025 – 2055	Maintain secondary structures / management practises.	Residential and commercial properties considered to be at risk in this period.	The current landscape and land use will continue to change; the shoreline may transgress further and the inter-tidal area may expand.	Some freshwater areas give way to saline habitats. Compensate for the reduction in freshwater interests.	Some unknown heritage assets may be exposed / lost.	Current amenity and recreational facilities will change i.e. potential for green tourism, as the new habitats develop further.
2055 – 2105	Maintain secondary structures / management practises.	Residential and commercial properties considered to be at risk in this period.	The current landscape and land use will continue to change; the shoreline may transgress further and the inter-tidal area may expand.	Further freshwater areas give way to saline habitats. Saline habitats will establish themselves. Compensate for the reduction in freshwater interests.	Some unknown heritage assets may be exposed / lost.	Current amenity and recreational facilities will change i.e. potential for green tourism, as the new habitats further develop.