

Management Unit 13 - Hill Head Harbour to Solent Breezes

Unit limits

3300 from 453500E, 102300N to 450700E, 103800N

Coastal Processes

A largely undeveloped stretch of shoreline comprising erodible cliffs in the northwest, running down to a shingle ridge fronting low lying marshes and Hill Head harbour in the south east. Cliff erosion provides sand and shingle which is transported south eastwards, giving a wide beach at Meon Shore. Some shingle is trapped within the groyne field at Hill Head harbour but much of the sand (and some shingle) is transported across the lower foreshore into Unit 12 under the combined action of waves and tidal currents.

- Geology*
- Bracklesham beds overlain by eroding cliffs of Brickearth and River Terrace deposits. A shingle storm beach fronts the river alluvium deposits within Titchfield Haven.
- Wave climate*
- Dominant waves from the southwest (30% of the time)
 - Secondary waves from northwest (15% of the time) and south to southeast (30% of the time)
- Tidal regime*
- Ebb tide sets to the southeast
 - Complex flood tide, sets mainly to the northwest
 - Maximum nearshore current <0.25 m/s, except off Hill Head harbour where maximum currents reach 0.5m/s
 - Very weak residual currents
- Sediment transport*
- Weak nett drift from northwest to southeast
 - Feed generated by cliff erosion within the Unit
- Possible future change*
- 300mm sea level rise over 50 years
 - Increased inshore wave energy, with mean direction shifting clockwise
 - Increased drift to the southeast

Table 13.1 Extreme wave heights and water levels

Probability	1:1year	1:10year	1:50year
Nearshore wave height H_s (m)	1.3	1.5	1.6
Maximum water level (MoD)	2.27	2.57	2.68

* at the -2m CD contour assuming MHWS tide level.

Existing defences

The inner perimeter of Hill Head harbour supports the coast road and is protected by old masonry, concrete walls and sheet steel piling. The outer part of the harbour is a shingle spit which has been stabilised by timber breastworks and timber groynes. The coast road runs northwest along the spit between Hill Head harbour and Meon Shore where it is protected by a concrete sea wall and groynes. From Meon Shore to Solent Breezes the cliffs are unprotected.

Natural environment

The foreshore is all within the Lee-on-the-Solent to Itchenor Estuary SSSI (also proposed Ramsar site and SPA), designated for biological and geological interests. In particular, the eroding cliffs north of the harbour provide evidence of the geomorphological development of the former Solent River system, while the beach and lower foreshore support shingle communities and provide feeding grounds for birds. The backshore area at Hill Head Harbour forms the Titchfield Haven SSSI and NNR (also proposed Ramsar site and SPA), designated for its variety of freshwater wetland habitats. Shoreline management of all these areas must comply with statutory procedures, including the Habitats Directive.

Land use

The backshore is almost entirely countryside, with some of the area classed as higher grade agriculture land. Hampshire County Council manage this area as part of the Brownwich and Chilling Coastal Area, combining agriculture with low intensity recreation and general conservation. The remaining backshore comprises the residential/holiday development area of Meon Shore and the designated wetlands of Titchfield Haven.

Human environment

The backshore is valued for public access to an undeveloped coastline. There is limited access to the sea, except at Hill Head Harbour, where there is a sailing club, and along the shingle beach immediately to the west. There are a number of sites of historical/archaeological interest both along the cliffs and across the foreshore.

Planning policies

The area is entirely designated as Coastal Zone and Countryside, so will remain undeveloped.

- Statutory policy documents* - Hampshire County Structure Plan, Deposit Draft
- Hampshire Minerals and Waste Plan, Deposit Draft
- Fareham Borough Local Plan, Consultation Draft

Strategic defence options

Table 13.2 Impact matrix

	Do nothing	Hold the line	Retreat the line	Advance the line
Effects on physical environment and coastal processes	Continued cliff erosion. Inundation of marshes due to breaching of spit.	Increased wave attack. Decreased sediment input from cliffs.	Reduced wave attack. Inundation of part of marshes.	Increased wave attack. Decreased sediment input.
Effects on human environment	Loss of harbour, recreation facilities, houses and coast road	Maintain or improve existing situation.	Loss of harbour, recreation facilities, houses and coast road	Potential for expanding harbour.
Effects on natural environment	Change of marsh ecology. Fresh geological exposures.	Loss of geological interest. Maintain marshes.	Partial change of marsh ecology. Fresh geological exposures.	Loss of geological interest. Maintain marshes.
Implications for coastal defence	Ongoing deterioration of defences and reducing standard of protection.	Improve existing defences. New defences along cliff	New flood defences across Haven.	Substantial new defences required along frontages to be reclaimed.
Impact on adjacent units	Continued drift to Unit 12. Outflanking of Solent Breezes.	Reduced drift to Unit 12.	Increased drift to Unit 12.	Reduced drift to Unit 12.

Losses due to “do-nothing” option

Overtopping damage and toe failure of the sea walls west of Hill Head harbour will cause loss of the coast road in the short term. Inundation of Titchfield Haven and change in habitat will occur as a result of breaching in the medium term. Losses would be largely recreational and environmental.

Foreshore at Meon Shore is presently stable but climatic changes could alter this situation. Holiday developments at Meon Shore should be considered at risk in the medium term, as they are close to the high water mark.

Ongoing erosion of the cliffs provides beach material and maintains geological/archaeological interest due to fresh exposures of beds and fossils. Several properties will be at risk in the medium term.

Preferred option

The economic, environmental and recreational consequences of a do-nothing policy around the harbour are not acceptable. There is no existing requirement for land reclamation or an expansion to Hill Head harbour to justify the high costs of advancing the line. Therefore, a mixed policy is considered to be appropriate for this Unit. Potential environmental losses and value of existing property and infrastructure justify **holding the line** around the harbour in the short term by maintaining the existing defences, while a **do-nothing** policy is appropriate to the frontage to the northwest.

In the medium-term a review of the retreat option may become appropriate, with a new flood embankment across the Haven replacing the existing line from the harbour to the cliffs.

Suggested management operations

- Short term*
- Maintain existing defences around Hill Head harbour and along the road to Meon Shore
 - Restrict further development at Meon Shore and along cliffs
- Medium term*
- Review benefits of holding the line around harbour and consider retreat if appropriate.

Preliminary economic assessment

Losses due to “do-nothing”

- Short-term - Damage and restricted use of coast road and harbour £0.5M
- Medium-term - Holiday and residential property at Meon Shore £1M

Cost of “hold the line”

- Short term - maintain defences £0.3M
- Medium term - upgrade defences £1M

Tangible benefits do not justify costs of upgrading defences either on the existing line or on a new line. Recreational benefits of the harbour, traffic disruption due to restrictions on road use and environmental benefits may need to be investigated if significant public funds are to be used for capital works. Obligations under the Habitats Directive will also need further investigation to establish an acceptable medium term management policy.