

Management Unit 7: Inn on the Beach to Langstone Harbour, Hayling Island

Unit limits

2700m from 470550E, 098800N to 468900E, 100000N

Coastal processes

Accretion due to littoral drift has resulted in the development of extensive shingle storm ridges at the western end of Hayling Island. However due to variations in the wave climate the build-up has been episodic and in the last decade there has been some erosion at Gunner Point. Converging tidal flows and shelter from strong wave action are likely to cause the Langstone ebb delta, including the East Winner Bank to continue to accrete. In the long term the likely trend will be for the shoreline to continue to accrete, but the shoreline shape may change, particularly in the entrance channel where the shoreline is continually shifting.

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| <i>Geology</i> | - Bracklesham Beds overlain by shingle storm beach with backshore accumulations of wind blown sand, and a wide sandy beach and nearshore bank |
| <i>Wave climate</i> | - Dominant and larger waves approach from the south (30% of time)
- Secondary waves from the south west (30% of time)
- Extremely wide foreshore reduces wave energy around Gunner Point |
| <i>Tidal regime</i> | - Ebb tide sets to south and west
- Flood tide sets to north and east
- Maximum currents in Langstone entrance between 1.5 and 3.0 m/s
- Weak residual currents converge towards Gunner Point |
| <i>Sediment transport</i> | - Sediment transport is weak and variable
- Long term transport direction is from east to west along the open coast
- Transport is from south to north from Gunner Point to the Langstone Ferry along the shore with a return transport in the channel
- The East Winner is a zone of nearshore accumulation of sand. Transport is mainly by tidal current action.
- Windblown sand is transported onshore from the East Winner bank. |
| <i>Possible future change</i> | - 300mm sea level rise over 50 years
- Increased inshore wave energy, with mean direction shifting clockwise
- Decreased nett drift to west, with possible continued erosion of Gunner Point |

Table 7.1 Extreme wave heights and water levels

Probability	1:1 year	1:10 years	1:50 years
Nearshore wave height Hs (m)*	2.1 - 3.3**	2.4 - 4.0	2.6 - 4.5
Maximum water level (m OD)	2.58	2.92	3.04

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

** lower values in entrance channel, higher values on open coast.

Existing defences

The Inn on the Beach is protected by a substantial recurved seawall set seaward of the adjacent shorelines. The shoreline immediately west of the Inn on the Beach is protected by a sloping timber revetment and a field of timber groynes. The shingle foreland of Gunner Point is unprotected, except by the wide lower foreshore.

The eastern side of Langstone Channel is affected by periodic erosion as shingle “waves” propagate northwards toward the harbour. Erosion has led to the construction of a minor concrete wall, concrete groynes and a gabion wall to maintain access to the sailing club. These defences are being undermined by tidal currents and wave action.

Towards Langstone Ferry the backshore is protected by an old concrete wall. Defences around Langstone Ferry include sheet pile and concrete walls built to protect shoreline developments and to provide recreational access.

Natural environment

Sinah Common and Gunner Point are designated as SINC and CHS, respectively, for their sand/shingle dune systems. The foreshore along the entrance channel is within the Langstone Harbour SSSI (also SPA and Ramsar site). The entire frontage and nearshore seabed to about 1.6km offshore is within the proposed Solent Maritime possible candidate SAC. Shoreline management operations must comply with statutory procedures including the Habitats Directive. In particular, the natural development of the backshore vegetation and geomorphology should not be disturbed.

Land use

The area is almost entirely open space. The Inn on the Beach has been built within the active beach zone and forms the eastern Unit boundary. The backshore area of Sinah Common comprises a private golf course. At the north end of the Langstone entrance channel there is a small area of housing, boatyards and the ferry terminal. Part way up the channel is a sailing club with an access track running along the shoreline to the north into the shore front public car park..

The East Winner bank, south of Sinah Common, was dredged for aggregate prior to 1994. Future dredging is unlikely; the site is still subject to freehold ownership, but the Habitats Directive will apply to future operations.

Human environment

The area is valued for public recreation and relatively easy access to an undeveloped area of coast. There are a number of sites of historical/archaeological importance near Gunner Point and on the East Winner bank.

Planning policies

The area is mainly designated as Countryside and Coastal Zone, with the easternmost frontage designated as Public Open Space. Development is restricted throughout.

Statutory policy documents - Hampshire County Structure Plan, Deposit Draft
Hampshire Minerals and Waste Plan, Deposit Draft
Havant Borough District Wide Local Plan, Consultation Draft

Non-statutory harbour policy Langstone Harbour Management Plan, Draft

Strategic defence options

Table 7.2 *Impact matrix*

	Do nothing	Hold the line	Retreat the line	Advance the line
Effects on physical environment and coastal processes	Continued instability west of “Inn”. Shingle waves moving up Langstone channel with cyclic erosion and accretion.	Natural shoreline development interrupted. Areas of future severe erosion	Allow natural dynamically stable shoreline to develop. Sediment released to feed drift.	Drift interrupted. Increased wave attack.
Effects on human environment	Loss of access to sailing club and some local erosion of golf course. Eventual loss of use of “Inn”. Eventual loss of defences around Ferry.	Opportunities for recreation and development.	Loss of small area of golf course. Eventual loss of use of “Inn”.	Reclaimed land available for development or recreation.
Effects on natural environment	Natural evolution of Gunner Point.	Loss of natural evolution of Gunner Point.	Natural evolution of Gunner Point.	Loss of natural evolution of Gunner Point.
Implications for coastal defence	Existing defences allowed to deteriorate.	Substantial new defences required.	Maintain and improve defences at Langstone Ferry. Remaining defences removed or allowed to deteriorate.	Substantial new defences required.
Impact on adjacent units	Negligible	Negligible	Negligible unless “Inn” removed	Accretion to east encouraged.

Losses due to “do -nothing” option

The timber breastwork and groynes west of the Inn on the Beach have only a limited life, after which backshore erosion may take place. Outflanking of the Inn on the Beach is a possibility in the medium term, after which it would no longer be a viable business property.

The short stretches of wall inside the entrance to Langstone Harbour are founded on shingle. Any scour at the toe of these structure will cause undermining and collapse. This is likely to occur in the short term along exposed lengths. The consequences are that the existing access to the sailing club will be disrupted and a small area of the golf course will be lost.

Infrastructure, recreation facilities and property at Langstone Ferry would be lost in the medium term through lack of maintenance of existing defences.

Natural changes to the shoreline around Gunner Point will alter the backshore ecology and geomorphology, but will not detract from its value as a conservation site or for informal recreation. Major changes to the shoreline are unlikely, but could lead to losses to the golf course.

Preferred option

The area is generally undeveloped and is subject to natural changes in the shoreline. There is no existing need for land reclamation to justify the high costs of advancing the line. Existing developments at Langstone Ferry should be protected at their present position. Other developments and recreation facilities should be moved to a more sustainable location in the short to medium term. The natural shoreline around Gunner Point should be allowed to evolve with minimal interference. Therefore the preferred option is **do nothing**, along most of the Unit, with a limited frontage of **hold the line** by continued maintenance at Langstone Ferry and a **retreat** as necessary along the entrance channel and to the west of the Inn on the Beach.

Suggested management operations

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| <i>Short- medium term</i> | <ul style="list-style-type: none"> - Maintain the Langstone Ferry frontage - Realign tee and part of fairway on golf course away from shoreline to remove requirement for defences between Ferry and Sailing Club. - Re-site recreation facilities west of Inn on the Beach and remove defences as they become ineffective. |
| <i>Medium term</i> | <ul style="list-style-type: none"> - Re-site Inn on the Beach to a sustainable position if it becomes threatened by erosion. Review boundary with Unit 6 and management operation if Inn is removed. |

Preliminary economic assessment

Losses due to “do-nothing”

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| <ul style="list-style-type: none"> - Property and facilities at Ferry, Inn on the Beach, loss of golf course land and other recreation facilities | £2M |
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Cost of “hold the line”

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| <ul style="list-style-type: none"> - Maintenance of defences at Langstone Ferry | £0.2M |
| <ul style="list-style-type: none"> - Construction of new defences and maintenance of existing line around remaining shore | £6M |