

## **Salient Points from the ShoreLine Management Plan:**

This coastline and dune system has suffered from a long history of sand extraction from the dune system as well as some extraction of tin rich beach sand. These activities are all detrimental to the dune system. Similarly excessive dredging and sand removal from the estuary mouth could result in additional dune erosion and the funnelling of excessive sand into the upper muddy estuarine habitats. The natural tidal regime also needs to be maintained in the estuary to ensure that it continues to function as a key feeding, roosting and resting site for birds of migration.

### **Policies Directly Affected:**

Coastal Defence Policy CS7 - Works affecting the Coast:

Coastal Development Policy TV32 - Hayle Harbour:

### **Observations**

Sluicing from the Copperhouse Pool can significantly alter beach/channel formation through the entrance.

Erosion or retreat of dunes at the estuary mouth would cover railway line and part of golf course on the Western side and loss of holiday chalets on the Eastern side. Deterioration of defences within estuary would threaten development including railway line, road and harbour structures.

South and East Quays are part of defence lengths.

Any retreat of either hard defence or the dunes would result in the loss and flooding of assets (road, railway, houses) in Lelant and Hayle. This makes set back at the current defence under either a retreat or do nothing strategy unacceptable.

### **Strategic Options**

On the East side of estuary mouth, dune erosion could result in the loss of holiday chalets. Again in order to prevent this loss and to enhance their habitat value it will be necessary to undertake management of the dunes. This will seek to stabilise and maintain the current position of the dunes (1999) making hold the preferred strategy. On this frontage the proximity of tourist developments makes any retreat difficult, however the relocation of the more seaward chalets may be necessary to allow a more natural dune to form in the long term.

### **Summary of options**

Do nothing	<b>Unacceptable</b>
Retreat the line	Acceptable long term
Hold the line	Preferred short term
Advance the line	<b>Unacceptable</b>

### **Preferred Strategy:**

Hold the line on the sand dunes either side of the estuary mouth to prevent natural roll back and loss of various assets. Also, hold to the existing defence line within the estuary to protect harbour and other assets.

**The actual extract relating to Hayle Estuary follows:-**

<b>MANAGEMENT UNIT STATEMENT</b>
<b>HAYLE ESTUARY</b>

**STRATEGY****Preferred Strategic Options (based on assessment in Impacts Matrix)**

There is long term potential for the sand dunes backing Porth Kidney Sands (length 1) to naturally roll back causing loss of part of the golf course and the railway line. In order to prevent this loss, and to maintain the habitat value of these SSSI designated dunes, it will be necessary to undertake management of the dunes. This will seek to maintain the current position of the dunes, making hold the preferred strategy.

On the east side of the estuary mouth, within length 4, dune erosion could result in the loss of holiday chalets. Again, in order to prevent this loss, and to enhance their habitat value, it will be necessary to undertake management of the dunes. This will seek to stabilise and maintain the current position of the dunes, making hold the preferred strategy. On this frontage the proximity of the tourist developments makes any retreat difficult, however, the relocation of the more seaward chalets may be necessary to allow a more natural dune to form in the long term.

Along the main tourist developed frontages of the estuary (lengths 2 and 3) those assets at either erosion or flooding risk in the near future are currently largely protected by defence structures. Protection of assets could be achieved through continued defence on this line. A hold the existing defence line strategy is preferred for this frontage as it will ensure the continued protection of human assets including the road, railway line and properties in Hayle and Lelant as well as the continued provision of quay walls and hence the operation of Hayle harbour. On those frontages which are currently undefended there is considered little need for intervention to protect assets. However, should works be required, impacts on the SSSI designated estuary mudflats would have to be fully assessed in conjunction with the RSPB who own much of the intertidal area.

An advance the line strategy may be considered within the estuary as offering the potential for tourist or harbour related developments. However, within length 2, and the Carmsew Pool area of length 3, the conservation value of the mudflats would make an advance unacceptable. On the main Hayle harbour frontage a limited advance may be acceptable, although, detailed study would be required to assess impacts on tidal dynamics and the any knock-on effects on other areas of the estuary.

Strategic Option	Implementation Length			
	1	2	3	4
Do Nothing	Unacceptable	Unacceptable	Unacceptable	Unacceptable
Retreat the Line	Unacceptable	Unacceptable	Unacceptable	Acceptable (Long Term)
Hold the Line	Preferred	Preferred	Preferred	Preferred (Short Term)
Advance the Line	Unacceptable	Unacceptable	Acceptable (pending study)	Unacceptable

**MANAGEMENT UNIT STATEMENT  
HAYLE ESTUARY**

**Implementation and Monitoring Guidance**

Implementation Length & Defences	1	2	3	4
None		7A2-04.01-08	7A2-04.09-12	None
Proposed Standard	n/a	50-200	100-300	n/a
Existing Standard	n/a	Poor condition (<5)	Poor/bad condition (<2)	n/a
Priority Score	n/a	8	8	n/a
Urgency Score	n/a	6	6	n/a
Economics Score	n/a	10	10	n/a
Total Score	n/a	24	24	n/a

Dune management measures should be carried out for the dune frontages (lengths 1 and 4). Whilst there have been some erosion problems around the east side of the entrance to the harbour, which could affect some holiday accommodation, there should be no hard defence intervention.

Throughout lengths 2 and 3, nearly all of the defences are reported to be in poor or bad condition, with a need to undertake remedial works assumed to be within 5 years. No requirement to increase the level of these defences has been determined from the data currently available, although it should be noted that no details exist for a number of these defences. No requirement for additional new defences where none exist at present has been determined and therefore no action is necessary in these areas. Future development proposals would, however, necessitate a more detailed examination of both of the above requirements. It is therefore probable that the preferred strategy for both these lengths can be achieved by improvements to the existing defences, with such works likely to satisfy grant aid requirements unless categorised as routine maintenance.

There is considered to be a general need for an integrated strategy study covering the whole Hayle Estuary which would examine the defence requirements more closely, including the dune belts and potential entrance blockage/sllicing scenarios.



