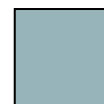


LANDSCAPE CHARACTER TYPE:

Intertidal Estuary and Harbour

Found in the sheltered locations of Portsmouth, Langstone and Chichester harbours and estuaries. Where the channels become small scale and divided, these are included in this type.



SIMILAR AND ASSOCIATED TYPES HAMPSHIRE DISTRICT AND BOROUGH LEVEL ASSESSMENTS

Basingstoke:	n/a
East Hampshire	n/a
Eastleigh	n/a
Fareham	Not defined
Gosport	Not defined
Hart	n/a
Havant	Harbour basin and Broad Inlets (both include channels and intertidal mud flats)
New Forest	n/a
Rushmoor	n/a
Test Valley	n/a
Winchester	n/a

SIMILAR AND ASSOCIATED TYPES IN NEIGHBOURING AUTHORITY ASSESSMENTS

Dorset	n/a
West Berkshire	n/a
West Sussex	Not defined
Wiltshire	n/a
Chichester Harbour	Harbour basin and Broad Inlet (both include channels and intertidal mud flats)

KEY IDENTIFYING CHARACTERISTICS AND BOUNDARY DEFINITIONS

- An intertidal/ or littoral zone marine landscape. Intertidal estuaries and harbours represent transitions from marine to terrestrial habitats
- Strong tidal streams especially at the entrances, less wavy than the main Solent and often short chop.
- Mixture of mudflats, shingles and saltmarsh in more sheltered areas.
- Often backed by man made sea defences and reclamation land.
- Historically embankments created for oyster beds.
- Winter wading birds, sometimes in huge numbers, dab and search for marine invertebrates in the mud – their distinctive calls adding to the sense of wildness.
- The anaerobic muds are an extraordinary preservative of archaeological artefacts

- including prehistoric tree roots remains and boat timber.
- Hulks of ship and wharf remains.
- Big skies which can be rapidly changing as weather moves in from the predominant south-westerlies.

PHYSICAL

GEOLOGY, LANDFORM, ELEVATION:

Bedrock and Superficial Geology: Predominantly Tertiary sands and clay formations, upper reaches formed of Nodular Middle and Upper chalk with flint overlain by tidal flat deposits.

The superficial tidal deposit geology of shingle is found at the top of the harbour beaches grading quickly down to extensive silty mud flats. In the lower reaches of the harbour, more sandy deposits are common.

Landform and Elevation: Extends from the mean high water springs to the mean low water springs tide lines. Does include occasional islands and man made shingle and imported material based features historically associated with the oyster bed industry. Rythes or channels cut through the mud to the main harbour channels. This type exists seaward of most man made embankments and sea walls. The exception being where these have naturally eroded and breached and where there has been a specific coastal management action 'not to hold the line' such as at Bunny meadows, Hamble estuary.

SOILS TYPES:

Typical soil type pattern: n/a

FUNCTIONS:

Hydrological function: Intertidal zone between mean high and low water mark. Can include higher area (supra littoral) such as saltmarsh, narrow strips of estuary and harbour beach that are above MHW and coastal defences. Berms and banks associated with e.g. oyster beds. Saltmarsh provides a natural buffer to shoreline erosion by dissipating wave action.

Food and Biomass:

Support important shell fish production – most significantly oyster beds and spat locations. Recreational anglers bait-dig the mud flats. Historically cordgrass has been used as an alternative to hay for livestock bedding and fodder.

LANDCOVER AND LAND USE PATTERN:

A mixture of exposed mud and algal and salt marsh beds. Today, the main commercial interest is for recreational craft marinas, pontoons and moorings, houseboats and MoD vessels. There are few industrial related commercial wharves, including small scale sand and gravel associated wharves. Increasingly rare coastal grazing saltmarsh examples include off Gutner point – Hayling Island, Ashlet near Fawley.

HYDROLOGY:

Subject to tidal processes. Sea level change by the end of the Bronze Age, allowed the sea to inundate the lower reaches of the small river valleys. Tidal ranges between 2 and 3 metres give rise to vast changes in the area of exposed mud and shingle

EXPERIENTIAL

ACCESS AND TRANSPORT ROUTES:

Popular RoW routes where they occur just below or on mean high water springs. However, even at low tide the large expanses of mud make access impractical. Recreational water based activities are often restricted to a few hours either side of high water unless vessels have access to deep water channels, outside this type.

TRANQUILLITY:

BIODIVERSITY

Intertidal harbours have narrow entrances and are fringed by sand and shingle spits at the mouth, with low freshwater inflow enabling the creation of large areas of saltmarsh, and extensive sand and tidal mud flats where eelgrass beds are exposed in the intertidal zone at low tide. Saltmarsh exists in sheltered areas where fine coastal sediments have accreted. Saltmarshes support specialist halophytic species capable of immersion along with invertebrates, algae and birds; they also provide sheltered nursery grounds for several fish species. Saltmarshes are often dominated by *Spartina anglica*, a hybrid cordgrass. Other species include saltmarsh grasses, glasswort, sea lavenders, sea aster and sea purslane. Mudflats support a diverse range of invertebrates and algae and, in some locations, communities of eelgrass with associated communities of algae and animals. Intertidal mud and sand tends to support very little vegetation other than green algal blooms and large beds of eelgrass in some harbours and inlets. They support species such as molluscs, crustaceans and worms, making them important feeding grounds and nursery for fish when inundated and subsequently for wading birds and waterfowl. As intertidal sand and mud beds stabilise and become vegetated, they zone into saltmarsh.

These intertidal harbours are of international importance for the wading bird and waterfowl populations which breed, feed and migrate through the area at different times of year, the intertidal harbours are also important in supporting a number of breeding seabirds. Intertidal estuaries vary in habitat depending on location and often strongly represent the transition from marine or riverine to terrestrial habitats. Around the Lymington River, in the west of Hampshire, habitats tend to consist of a mixture of terrestrial habitats including tall marginal vegetation, including reedbeds, and broadleaved woodland with small areas of marine habitat consisting of a small, discrete patch of intertidal mud and sand (including algal beds) and a further discrete patch of coastal grazing marsh with marinas. Around the Beaulieu River and Southampton Waters, habitat tends to have a stronger marine association, more similar to intertidal harbours, consisting largely of continuous saltmarsh with intertidal mud and sand (including algal beds). There is some scattered saltmarsh and small patches of coastal grazing marsh and residential areas where gardens can provide diverse habitat opportunities. Continuous and scattered saltmarsh and coastal grazing marsh represent a zonation of low level marshes, regularly inundated through to upper saltmarshes which are only occasionally inundated.

A number of BOAs exist and extend into this landscape character type:

- New Forest BOA identifies opportunities for lowland heath, lowland dry acid grassland, lowland mixed deciduous woodland, purple moor grass and rush pastures, lowland meadow and wet woodland habitat creation and enhancement;
- The New Forest Coast BOA identifies opportunities for coastal grazing marsh, coastal saltmarsh and purple moor grass and rush pastures habitat creation and enhancement;

- Itchen Valley BOA identifies opportunities for wet woodland, lowland meadow, purple moor grass and rush pastures, floodplain grazing marsh and reedbed habitat creation and enhancement;
- The Solent BOA identifies opportunities for coastal grazing marsh and coastal saltmarsh habitat creation and enhancement;
- The Hamble Catchment BOA identifies opportunities for wet woodland, lowland meadow, lowland mixed deciduous woodland and purple moor grass and rush pastures creation and enhancement;
- Chichester/ Langstone Harbours and Hayling Island BOA identifies opportunities for coastal grazing marsh, purple moor grass and rush pastures, coastal saltmarsh habitat creation and enhancement;
- Portsmouth Harbour BOA identifies opportunities for coastal grazing marsh, coastal saltmarsh and purple moor grass and rush pastures habitat creation and enhancement.

HISTORIC ENVIRONMENT

ARCHAEOLOGY

In the harbours evidence suggests that these are the terraces and banks of Rias, which have undergone a process of relative sea level rise. Surviving island are known to contain rich archaeology of the coastal use of this harbour during this drowning. At a later date these mud flats in places have evidence of oyster beds, and fish traps, and it is likely that this resource is greater than currently understood. It seems likely that a certain times of the tide these areas would have been exploited by canoe for the wild fowl. It is also an area which will have archaeological evidence of boats and hulks, lost or abandoned in the intertidal areas.

HISTORIC SEASCAPE CHARACTER

Reclamation of former salt marshes for grazing was a significant historic process. Where these have subsequently been reclaimed by the sea they fall within this type. Former oyster beds sites that have been reclaimed by the sea and some island sites like Fawley in Chichester are included in this type. Wildfowling areas.

HISTORIC BUILT ENVIRONMENT

Settlement types by form: Bursledon pool and the Kench (Hayling Island) have collections of houseboats.

Building materials and type; Tide mill associated structures, houseboats, bridges, wharves. Some seawall defences uses a mixture of local and ship's ballast in their construction - and their type and origin can be very varied.

VISIBILITY

Prominency: Large extents visible from the shoreline and where they happen to occur in Hampshire, prominent from Portsdown Hill ridge. Once a short distance away from the shore, the harbours are not visible from the coastal plain landscapes. Obvious rapid temporal changes with the fluctuations of the tide.

Enclosure: The harbour fringes present a mix of edge treatment. Well treed field boundaries act as windbreaks and impart a feeling of a wooded edge to long stretches of the shore.

Development adds to the relatively short views of the mainland and a strong sense of enclosure and together with narrow harbour entrances enhances the sense of protection from the open sea of the Solent.

Public perceptions: At high tide the reflective surface of the water can make the harbours more prominent. The sheer high density of development around the harbours and its recreational draw means that there is a heightened awareness of what goes on in the harbours.