



Panorama looking north over Angle Bay, refinery visible on right



Mouth of Milford Sound from near Rat Island, with ferry off St Ann's Head



In the mouth of the Sound approx 500m from shore





Sandyhaven Pill (©John Briggs)

Dale Roads with refinery in distance

Summary Description

The area forms the outer part of Milford Haven which is a large sheltered drowned ria. The mouth of the Sound has an exposed open sea aspect with strong tides and currents contrasting with the sheltered bay of Dale, small beach at West Angle Bay, and creeks such as Sandyhaven Pill. There is nature conservation interest especially around Dale and coastal forts relating to the Haven's historic strategic value. The sea area is busy with ferry and commercial shipping, with the refinery and other energy and port infrastructure in background views and the area is popular for recreation and sailing, especially around Dale.

aspectKey Characteristics

- Large sheltered drowned ria with red steep sandstone cliffs and sheltered bays and shallow creeks.
- Mouth of the Haven has an open sea character with strong currents and swell.
- Rolling inland landcover comprises open arable and pasture with low hedgebanks, with deciduous woodland in incised valleys.
- Traditional and medieval settlements.
- Historical military features and associations including forts.
- Busy natural harbour mouth with large vessels including tankers and ferries using the waters.
- Popular for sailing and other recreation especially around Dale.
- The coastal path runs around the entire sea edge.
- Wide and contained views.

Physical Influences

Milford Haven is a classic example of a ria (coastal inlet formed by drowning of a river valley). The outer zone of the southward opening Haven is incised through east-west striking Silurian (Grey Sandstone Formation), Devonian Old Red Sandstone (Raglan Mudstone Formation, Ridgway Conglomerate Formation) and Carboniferous Limestone. Red cliffs bound the wide mouth to the Haven to both west (St Ann's Head) and east (East Blockhouse Point; Rat Island 23m aod, Sheep Island 36m aod). Fallen rocks fringe the coasts. The western headland is indented by shallow bays, whilst to the east, West Angle Bay is deeply incised. On the north side of the Haven, where the headland is 50-60m aod), the land slopes down to a coast indented by bays, the river valley at Monk Haven, the sinuous sandy estuary at Sandyhaven Pill and the broad estuary at Dale. Intertidal areas are rocky or shingle around the headlands (52%) and sandy in bays (43%). Salt marsh forms locally (4%). Wind and wave erosion are reduced in the estuary mouth. The tidal estuary is a depositional area with sediment transported through traction, saltation and suspension.

The shallow (<30m) sandy sea floor slopes gently (<1°) in the estuary but has a low to moderate

slope (1010o) across the channel mouth (<25m). Areas of rocks form local shallows across the channel. The seas of the Haven are sheltered from wave stress, and are strongly tidal. Tidal currents west of St Ann's Head set northwest and southeast, with tidal flow <3 knots. In the mouth of the Haven tidal currents set northeast southwest, with tidal flow <2 knots. The tidal range is 6.1m.

The landcover is mixed farmland of arable and pasture with low cut hedgebanks and fencing in medium-sized semi-regular fields to the north and west in the Dale peninsula and around St Ishmaels and in small fields including linear burgage plots associated with the village of Angle to the east. Small, steep sided wooded valleys cut through the rolling lowland plateau to the north. North of Dale the bay turns to a large marshy area with retained water.

The waters form part of the Pembrokeshire Marine SAC. The coast to the west forms part of the Dale and South Marloes Coast SSSI, the northern coast, estuaries and wetlands form part of the Milford Haven Waterway SSSI and the south east is part of the Angle Peninsula Coast SSSI. Seminatural habitats range from sheltered inter-tidal mud flats in the shallow embayment of Angle Bay, to lowland mixed deciduous woodland. Cliff areas comprise a mosaic of rough pasture and scrub, with species including chough and peregrine falcon. The small tributary estuary of Sandy Haven supports several species of birds during the winter. There is a HPMCZ proposed which runs from the shore at Dale [Gann Flats] out east to Watch House Point and south and then west to Dale Point. The important habitats include sheltered muddy gravels and subtidal mixed muddy sediments.

Cultural influences

Milford Haven is the fourth busiest waterway in the British Isles, with freight tonnage expected to increase in the coming years. Milford Haven is one of the few deep water natural harbours in the British Isles capable of being entered in all weathers and at any stage of the tide. It is the entrance to a classic `harbour of refuge', home to the Royal Navy and is now an integral part of Britain's oil and gas infrastructure.

The area is an exceptionally rich area in terms of historic seascape character. Medieval burials are confirmed in West Angle Bay. A pair of blockhouses was built by Henry VIII to guard Milford Haven. A chain of forts was later built to defend it from Napoleon III - Thorn island on the south side, South Hook on the north, Stock Rock on a mid-channel rock, and Dale Fort, set within ramparts of an earlier promontory enclosure.

Scheduled monuments include:

- PE307 (promontory fort): community: Herbrandston
- PE334 (fort): community: Herbrandston
- PE411 (promontory fort): community: Angle
- PE554 (cemetery): community: Angle
- PE566 (airfield): community: Marloes and St Brides (partly in SCA25 and SCA26)

Part of this area lies within the Milford Haven Waterway Landscape of Outstanding Historic Interest. Angle is a Conservation Area extending as far as West Angle Bay.

There are over 20 wrecks in the area which is symptomatic of its intensive use. These include military craft such as HMS Leda which lies in West Angle Bay and HMS Caroline and HM MGB12 which lie near the main channel. Some wrecks are in the late 19th century while others were sunk in the 1970's.

As with seascape character area 32- Milford Haven was the landing-place of Henry Tudor, Henry VII, who marched from here to defeat and kill Richard III at Bosworth field. In *Cymbeline*, Imogen refers to Milford.

The main settlement in the area is Dale which is focussed on sailing and recreation with the fringes of the rural settlement of St Ishmaels to the north. Elsewhere the settlement is dispersed rural farmsteads and dwellings. The large scale structures of the LNG terminal, refinery and other associated infrastructure lie to the east.

Access to the Haven for large tankers is through a narrow passage, passing beneath the lighthouse on St Ann's Head, although the opposing headlands stand over two kilometres apart at their narrowest point.

Commercial shipping is focussed at the approaches to the busy Milford Haven Waterway - the The Port of Milford is the third largest port in the UK and handles 29% of the UK's seaborne trade in oil and gas. The activity passing through the outer Haven relating to the port's operation activity includes tugs, service and pilot vessels with occasional dredging. A ferry out from Pembroke Dock regularly passes through these waters. Commercial fishing vessels come out from Milford. Recreational motor and yacht cruising activity comes out of two marinas up river as well as the many swinging moorings along the waterway. There is a lighthouse on St Ann's Head at the entrance to the Milford Haven Waterway. There are significant commercial navigational lights, marks and buoys along the approaches as well other marks for recreational navigation.

Sea angling is especially popular with small craft often anchored just off St Ann's Head as well angling from rocks and beaches, especially within Angle Bay. Kayaking, rowing and windsurfing are to be found all round this area of coast. Dinghy and yacht sailing activity, including racing, takes place throughout the year. There is a heavily used cruising route from here around the coast west to Fishguard, across the Bristol Channel and to points east such as Tenby. There are also numerous routes across to Ireland. Dale Roads offers several swinging mooring with a pontoon and slipway at the village behind. There is a sailing and surfing school with attendant students out in the bay. Windsurfing is popular off Dale and Angle. There is a slipway at West Angle. Wildlife boat trips come out from Dale or pass through these waters en route for the Islands. Beach activities take place in the secluded bays of Watwick, Dale and Sandy Haven and at West Angle Bay across the water to the south, sheltered from southerly winds..

Dale Fort Field Centre lies on a headland and is used for coastal scientific research and field studies. At the Gann in Dale are mudflats and a lagoon popular for wildlife spotting. There is a prominent island - Thorn Island - just off Angle and a Martello Tower to the north.

Fishing in the area comprises of hand gathered cockles and razor clams, beach seining and beach nets, set nets in the outer waters around the mouth, lobster and crab potting and light otter trawling.

The area has a Round 24 licence for oil and gas.

Aesthetic, perceptual and experiential qualities

There is a contrast in scale and exposure between the open and exposed sea corridor at the mouth of the Haven with more contained and sheltered bays, with their channelled views. West Angle and Dale bays feel very sheltered and safe. On boast in the mouth of the Haven there can be a large swell and currents , especially to the west, which contrast with the relative calm of the harbour.

The rough and rugged textures of red sandstone cliff edges, contrast with the open rolling arable and pastoral plateau and gentle rolling hills.

At low tide, the exposed alluvial and stony beach at Dale stretches far out, with strong seaweed smells. Dale has colourful painted houses, and is busy especially in summer with boats and holiday activity. This contrasts with the more recessive parts of the area. There is a strong sense of place at Dale village, and at the old forts in varying condition.

Views vary from open framed views out to sea past the headlands of St Ann's and Rat Island, with lighthouse and masts breaking the skyline, to areas such as Dale where contained views are set against distant view of refineries. Sometimes ships, including ferries, will provide a seaborne focus.

There is a strong contrast between this essentially rural, natural and tranquil area with the Inner harbours dominated by large scale energy and port facilities, settlement and associated lighting which forms a significant backdrop to many views.

Cultural benefits and services

The area contributes significantly towards leisure and recreational services in the form of marine recreation and beaches, to natural heritage in the form of the rugged cliffs and bays, creeks and marshes. The cultural associations are very strong with the old villages and field patterns and association with military history and naval shipping, and the area continues to be an important focus of energy-related industry and commercial shipping activity.

Forces for change									
Summary		Key forces for change							
The estuary is a sediment sink. The shoreline management plan generally states 'do nothing'. At Dale, the SMP is to 'hold the line' to protect village assets.	Special Qualities	Natural processes/ climate change	Visitor pressure	Marine use- commercial and fishing	Offshore energy or minerals	Development pressure	Land management changes		
Coastal erosion is causing scheduled monuments to fall into the sea eg East		Natural change	Visitor p	Marine u	Offshore mineral	Develop	Land ma	MOD use	
Blockhouse.	Coastal Splendour								
The level of activity in the waters will increase as Milford Port increases traffic, especially in LNG. The Gann is one of the potential HPMCZ's which, if implemented, will significantly affect levels of permitted activity at Dale which is popular for sailing and recreation. Visitor pressure on recreational hotspots including Dale.	Islands								
	Diversity of Landscape								
	Remoteness, Tranquillity and Wilderness								
	Diverse Geology								
	Richness of Habitats and Biodiversity								
	Rich Archaeology								
	Distinctive Settlement Character								
	Cultural Heritage								
	Accessing the Park								
Development pressure for holiday accommodation.	Space to Breathe Key		Chang	e occurr	ing in th	ne area	affecting	g the	
Impact of industry and shipping on ecology and tranquillity.			selected special quality						
Possible intensification of arable farming for potatoes for example, leading to potential loss of habitat such as hedgerows.									
Key sensitivities									
Factors contributing to sensitivity		Factors detracting from sensitivity							
Remote, unspoilt cliffs and sheltered bays and estuaries.		Commercial shipping and adjacent refinery and other industrial and urban land uses.							
Popular recreational destinations such as Dale.		Presence of established recreational							
Nature conservation interest especially around Dale.			activity. Contained ria enclosed by surrounding hills						
Richness of military and nautical history.			and plateau.						
Pembrokeshire Coast Path as a sensitive receptor.			Lighting associated with settlement, shipping and industry.						