

COASTAL SUBTIDAL HABITATS

Below the tidal limit Cumbria's seabed is almost entirely of mud, silt, sand and gravel sediments, with specialised animal life. These habitats can be damaged by a variety of development and fishing activities.

UK Priority Habitats covered by this statement:

Tide-swept channels
Subtidal sands and gravels

Cumbria Biodiversity Action Plan habitats covered by this statement:

Coastal habitats

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Description

These habitats occur below the tidal zone and hence are permanently submerged. The seabed off the coast of Cumbria is almost entirely sedimentary in nature, with a few areas of boulder scars.

Sediments range from cobbles and pebbles, through coarse, fine and muddy sands. The communities present are typically species-poor but high in biomass. Sandy sediments in shallow waters support bivalve molluscs; whilst, on silts and muds, polychaete worms, bivalves and the Sea Mouse are typical. Surface dwellers include the Brown Shrimp, Shore Crab, Swimming Crab, Common Starfish, Plaice and Flounder. In deeper waters, below 10m, the sediments are more stable and support large numbers of brittlestars, as well as spider crabs, starfish and the Norway Lobster (scampi) on fine muddy sands. Gravelly sands support a 'deep Venus' community which dominates the Irish Sea and is characterised by the burrowing Heart Urchin. This habitat is an important feeding ground for terns.

Where boulder scars occur, sponges, such as the Erect Sponge, hydroids (sea-firs), bryozoans, including Hornwrack, soft corals and horse mussels can be found.

'Tide-swept channels' includes channels between islands, such as Walney Channel, and estuarine channels such as that of the Solway Firth, Duddon Estuary and Morecambe Bay. Most of the tidal channels in Cumbria are of sand and gravel and support similar communities to those described above. Where boulder scars occur in tide-swept but wave-sheltered conditions, which provide a

regular supply of food and reduce sedimentation, richer marine communities may develop. These may include the massive form of the Breadcrumb Sponge and beds of Fan Worms.

Distribution and Extent

Subtidal sands and gravels cover almost the entire subtidal seabed off the coast of Cumbria, with deeper muddy sands to the south west of St Bees head.

Boulder scars which occur extensively in the intertidal zone may extend into the shallow subtidal. There are areas of subtidal boulder scar off the coast of Walney Island. Most of these boulder scars are in shallow water and exposed to wave action, although this is limited by the enclosed nature of the Irish Sea.

In the southern part of the Walney Channel several boulder scars, occurring in tide-swept but wave-sheltered conditions, support a greater diversity and abundance of marine life, similar to more extensive communities found, for example, in the Menai Strait.

Conservation Issues

Much is extensively fished with bottom-towed trawls or dredges. This is likely to have extensive and significant impacts upon many of the seabed habitats and communities. These activities are known to damage and destroy these fragile and complex marine ecosystems, and may replace them with simpler and less diverse communities.

Locally, the extent of tide-swept boulder habitats in the Walney Channel has been reduced as a consequence of the capital dredging undertaken to enable Trident Submarines to be constructed and launched at Barrow.

Oil and gas exploration, drilling and pipelines can result in localised temporary or permanent loss or damage to subtidal communities, as can off-shore windfarms.

Extraction of marine aggregates can result in loss or damage to subtidal habitats and affect sediment transport processes.

Discharge of sewage and industrial pollutants can also alter the composition of subtidal communities, although generally the quality of these discharges is being improved.

Planning Considerations

- New Marine Conservation Zones, MCZ's have been designated in the Irish Sea and more are being considered. See information links below for more details.
- These habitats are physically located outside the jurisdiction of local planning authorities, however planning decisions can still have impacts on them via discharges to sea of contaminated groundwater, from sewage outfalls and from industrial processes or developments, e.g. brine discharge. The development of marinas or port facilities for large vessels which require capital or maintenance dredging of channels may affect subtidal habitats. Pipelines and cables from offshore installations such as windfarms and gas fields may also damage boulder scars and other seabed features.
- Although this habitat lies largely outside the SSSI system, which extends to the low water mark, most of the Cumbria coast, including the major estuaries, is of international importance designated as Special Area of Conservation and Special Protection Area, and these designations can extend beyond the SSSI boundaries. These designated sites include extensive areas of subtidal habitats.

- The Habitats Regulations 1994 require the assessment of the effects of plans or projects on the conservation interests of these European Sites.
- Any development that may impact directly or indirectly upon subtidal habitats within, or outside of, a Special Conservation Area or Special Protection Area would require an assessment of the likely effects on the habitats and, as necessary, appropriate measures to avoid or mitigate damage.

Enhancement Opportunities

- Any opportunities to reduce pollution and other impacts resulting from existing developments, through new development and design opportunities, will benefit subtidal habitats.

Key Species

The following Key Species could benefit from enhancement of this habitat, or be negatively impacted upon by inappropriate developments on or near this habitat:

Greater Scaup
Little Tern
Common Scoter

Arctic Skua
Common Seal
Harbour Porpoise

Bottle-nosed Dolphin
Grey Seal

Further Information

[Planning and Development for Protected Sites and Species](#)

[JNCC marine habitats webpages](#)

[UK Marine SAC website](#)

[Marine Conservation Society](#)

[Marine SPA Consultations Natural England](#)

[Advice Packages for Marine Protected Areas](#)

[Irish Sea Marine Conservation Zones- Resources](#)

[Marine Conservation Zones Project-JNCC](#)

[Marine Protected Areas, Irish Sea, with a link to Marine Planning Information](#)

Contacts

- **Natural England**, 0300 060 3900 Email: cumbria@naturalengland.org.uk
- **Cumbria Wildlife Trust**, 01539 816300 Email: mail@cumbriawildlifetrust.org.uk

Current Action in Cumbria

- Estuary partnerships and strategies are in place on Morecambe Bay, Duddon Estuary and the Solway Firth; other coastal partnerships include the Solway Rural Initiative, Drigg Forum and Ministry of Defence Eskmeals Conservation Group. The North West Coastal Forum is raising the profile of coastal issues in NW England for consideration in regional planning.
- Under the Habitats Regulations Schemes of Management have been developed for Morecambe Bay, Duddon Estuary and Solway Firth European Marine sites. These schemes have reviewed the management of the estuaries and identify actions that relevant authorities will take to deliver the conservation objectives for the sites.