COASTAL INTERTIDAL HABITATS

A range of wildlife-rich priority habitats between high and low tide; their form is dependent on their coastal location, degree of wave action and substrate.

UK Priority Habitats covered by this statement:

Blue mussel beds
Coastal saltmarsh
Estuarine rocky habitats
Intertidal boulder communities
Intertidal mudflats
Peat and clay exposures
Sabellaria alveolata reefs
Seagrass beds
Sheltered muddy gravels

Cumbria Biodiversity Action Plan habitats covered by this statement:

Coastal habitats
Honeycomb worm reefs

Saltmarsh, Bowness-on-Solway © Stephen Hewitt

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Description

Intertidal mudflats and sandflats are submerged at high tide and exposed at low tide. The flats are highly mobile and are made predominantly of fine sands and silt. Fine sandy sediments occur in the inner estuary with coarser sediments in the outer reaches. Typical fauna of these mudflats includes shellfish such as the small pink Baltic Tellin and the Edible Cockle, and many species of worm, including lugworms and ragworms. These communities provide a valuable food source for feeding birds and fish.

Saltmarshes occur in sheltered coastal areas free of strong wave action with shallow shores and a high sediment load. Pioneer plants like glassworts, Common Saltmarsh-grass and algae create conditions suitable for other plants to become established, such as Sea Lavenders, Sea Aster, Sea Purslane and Thrift, to become established. The extensive areas of flats and saltmarsh in estuaries act as a refuge for roosting birds.

Intertidal scars (exposed boulders and rocks) support rich and well developed animal and plant communities typical of rocky areas. They include brown seaweeds and the Edible or Blue Mussel, as well as Barnacles and Periwinkles. The habitat is also important for crabs and various fish species and supports the reef building Honeycomb Worm.

Distribution and Extent

The intertidal area extends all around the coast of Cumbria, but is particularly extensive in the large estuaries of the Solway Firth, Morecambe Bay, Duddon Estuary and estuary of the River Irt. These are almost exclusively soft sediment habitats with extensive mudflats and saltmarshes.

Intertidal bedrock is largely restricted to around St Bees Head and off Parton/Lowca. Boulder and cobble scars, formed from eroded glacial drift, are found extensively on the open coast of Cumbria and to a lesser extent within the estuaries. Around 80% of the Cumbrian coastline is classified as European Marine Sites (Special Area of Conservation and/or Special Protection Area).

Conservation Issues

Issues that can significantly affect intertidal habitats are the disruption of natural processes by coastal defence and protection works, dredging, developments such as estuary barrages and road crossings and extraction of marine sand and gravel.

Developments, including those for industrial, retail and housing and the routing of cables and pipelines can all lead to damage to this habitat, both through direct loss of habitat as well as disruption of natural coastal processes. Pollution, from developments and from offshore spillage, is a continual threat to intertidal habitats.

Cord-grass *Spartina anglica* is spreading in Cumbria. It is a naturalised pioneer species of saltmarshes (derived through hybridisation of a native species with an introduced species) which often dominates the initial stages of saltmarsh development, though it is generally replaced by other saltmarsh species such as Saltmarsh Grass. In some locations Cord-grass may present a threat to Seagrass beds. Cord-grass development may also affect the wader and wildfowl use of intertidal habitats.

Fisheries activities, such as trawling, suction dredging for cockles, shrimping and shellfish farms, can cause damage to marine communities, as can bait digging.

Sea level rise resulting from climate change will cause coastal squeeze (reduced habitat extent) of intertidal habitats where they are backed on the landward side by features such as sea walls or cliffs preventing the landward migration of these habitats.

Planning Considerations

- PPS9 states that local authorities should conserve important natural habitat types (priority habitats and habitats of principal importance in England), and identify opportunities to enhance and add to them.
- Any development either within or adjacent to the intertidal zone may have an impact on this sensitive environment.
- Any development that may impact upon intertidal habitats, or their species interests, would require an assessment of the likely effects on the habitat/species and, as necessary, appropriate protection and mitigation measures.

- The majority of the intertidal habitat in Cumbria is covered by the SAC/SPA/SSSI system, although a significant length of intertidal habitat is not designated.
- Most of the intertidal habitat is of international importance as Special Areas of Conservation, for the habitat itself, and Special Protection Areas, particularly for migratory and wintering bird populations. Any development that may have a significant effect, directly or indirectly, on these sites would need to be assessed under the Habitats Regulations.

Enhancement Opportunities

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

Habitat Targets

- Habitat targets for Cumbria can be found in a separate document "Habitat Targets, Planning Considerations and Enhancement Opportunities" available from www.lakelandwildlife.co.uk or by clicking here

Key Species

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

Allis Shad
Twaite Shad
European Eel
Sea Lamprey
River Lamprey
Atlantic Salmon
Natterjack Toad
Great Crested Newt
Skylark
Short-eared Owl
Barnacle Goose
Hen Harrier
Tundra (Bewick's) Swan
Whooper Swan
Merlin
Peregrine
Curlew
Golden Plover
Lapwing

Further Information

UK BAP coastal saltmarsh

UK BAP mudflats

UK BAP seagrass beds

UK BAP sheltered muddy gravels

UK BAP Sabellaria alveolata reefs

UK Biodiversity Partnership, Species and Habitats Review, 2007 several new priority habitats

Habitats of principal importance in England Section 41 NERC Act list

Cumbria BAP coastal habitats

Cumbria BAP honeycomb worm reefs

JNCC marine habitats webpages

Buglife: habitat management advice: coastal saltmarsh

Buglife: habitat management advice: mudflats

Environmental Stewardship and HLS handbook

Duddon Estuary Partnership

Morecambe Bay Partnership

Solway Firth Partnership

Marine Conservation Society

Contacts

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- **Cumbria Wildlife Trust**, Tel: 01539 816300, mail@cumbriawildlifetrust.org.uk
- **RSPB**, Tel: 01697 351330, norman.holton@rspb.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.
- Schemes of Management exist for Morecambe Bay and Solway Firth European Marine Sites.
- The Environmental Stewardship Scheme run by Natural England provides financial incentives to manage land in a way that is sympathetic to its nature conservation interest with specific inter-tidal coastal options.
- Shore to Sea, the Cumbria Wildlife Trust marine project, is carrying out surveys, advising on sustainable sea food sources and raising general awareness.