

# EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

## Citation for Special Area of Conservation (SAC)

<b>Name:</b>	Solway Firth
<b>Unitary Authority/County:</b>	Dumfries and Galloway, Cumbria
<b>SAC status:</b>	English part designated on 1 April 2005 Scottish part designated on 17 March 2005
<b>Grid reference:</b>	NY144648
<b>SAC EU code:</b>	UK0013025
<b>Area (ha):</b>	43687.99
<b>Component SSSI:</b>	Upper Solway Flats and Marshes SSSI

### Site description:

The Solway is a large, complex estuary on the west coast of Britain. It is one of the least-industrialised and most natural large estuaries in Europe. Tidal streams in the estuary are moderately strong and levels of wave energy can be high. There is considerable seasonal fluctuation in water temperature, owing to the shallow nature of the estuary. The sediment habitats present, mainly dynamic sandflats and subtidal reefs and sediment banks, are separated by six main river channels, which are continually changing their patterns of erosion and accretion. The estuary has been little affected by enclosure, with the result that it demonstrates unusually large areas of upper marsh and transitions to freshwater grassland communities. There is a greater proportion of sand in the substrate than is found in more southern saltmarshes.

The mid-upper marsh is heavily dominated by saltmarsh rush *Juncus gerardii* community with smaller areas of the saltmarsh-grass/fescue *Puccinellia/Festuca* communities. The glasswort *Salicornia* spp. saltmarsh is part of a complete sequence of saltmarsh types, from pioneer communities through extensive mid to high-saltmarsh and transition to tidal grazing marsh. The pioneer marshes within this site develop in response to changing river channels and erosion of existing marsh and form part of a dynamic suite of maritime habitats. Some of the species present, for example sea-purslane *Atriplex portulacoides*, common sea-lavender *Limonium vulgare* and lax-flowered sea-lavender *Limonium humile*, are at their northern limit in the UK.

The shingle and sand dune areas of Grune Point and Preston Merse support a typical range of plant species including burnet rose *Rosa pimpinellifolia*, sea-holly *Eryngium maritimum*, bloody crane's-bill *Geranium sanguineum* and the uncommon Isle of Man cabbage *Rhynchosinapis monensis*. Dyer's greenweed *Genista tinctoria* occurs in the small areas of dune heath and grassland.

The sublittoral sediment communities are typically sparse in the inner estuary, owing to the mobility of the sediment coupled with low and variable salinity. Salinity ranges from fully marine to estuarine in character, and these gradients in physical conditions add to the ecological diversity within the site. The presence of intertidal sediment flats of fine sands, rather than muds, in conditions of estuarine salinity is a notable feature. Communities become richer towards the outer estuary, where there are less extreme environmental conditions and more varied substrates.

The dominant species of the infaunal communities comprise different annelid worms, crustaceans, molluscs and echinoderms, depending on the nature of the substrate. For

example, the bivalve molluscs *Fabulina fabula* and *Spisula subtruncata* occur at the edge of sandbanks in fine and medium sand respectively. These communities are richer in the less extreme conditions of the outer estuary. The estuary also provides a migratory passage for sea lampreys *Petromyzon marinus* and river lampreys *Lampetra fluviatilis* to and from their spawning and nursery grounds.

**Qualifying habitats:** The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Estuaries
- Fixed dunes with herbaceous vegetation (grey dunes). (Dune grassland)\*
- Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats)
- Perennial vegetation of stony banks. (Coastal shingle vegetation outside the reach of waves)
- Reefs
- *Salicornia* and other annuals colonising mud and sand. (Glasswort and other annuals colonising mud and sand)
- Sandbanks which are slightly covered by sea water all the time. (Subtidal sandbanks)

**Qualifying species:** The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- River lamprey *Lampetra fluviatilis*
- Sea lamprey *Petromyzon marinus*

This citation relates to a site entered in the Register of European Sites for Great Britain.

Register reference number: UK0013025

Date of registration: 14 June 2005

Signed: *Trew Salmon*

On behalf of the Secretary of State for Environment, Food and Rural Affairs