Site Name: Porlock Ridge and Saltmarsh **County:** Somerset

District: West Somerset

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981(as amended)

Local Planning Authority: Exmoor

National Grid Reference: SS 880479 **Area:** 186.29 hectares

Ordnance Survey Sheet 1:50,000: 181 **1:10,000:** SS84NE

Date Notified (Under 1949 Act) Not applicable

Date Notified (Under 1981 Act): 1990 **Date of last revision** 3 May 2002

Reasons for Notification:

This site is notified for its nationally important active coastal geomorphological features. It is also nationally important for the saltmarsh and coastal vegetated shingle habitats which occur here.

General Description:

Geomorphological

This site comprises a shingle ridge and associated saltmarsh hinterland extending for a distance of approximately 4 kilometres along the west Somerset coast, immediately north of Porlock village.

Porlock shingle ridge was formed, as sea level rose during the middle part of the Holocene epoch, from shingle eroded from head deposits which masked the sea cliffs to the west after the last glacial period. This major source of coarse sediment has long since disappeared, leaving only a relatively insignificant input of sediment from occasional cliff falls. The inputs of sediment to the beach ridge from this modern source are too small to sustain the earlier beach profile and the increase in the length of the ridge as it continues to rollback, in a lengthening curve, into Porlock Bay. This means that the ridge has been growing steadily thinner ever since it was formed, a condition exacerbated by the further reduction in shingle inputs caused by the construction of groynes at Gore Point at the western extremity of the ridge. The modern ridge was therefore unable to withstand recent extreme storm events and a breach opened during the storm of October 1996 which flooded the low lying marsh hinterland. Rapid evolution of the beach following the breach is providing a unique opportunity to study the development of a coarse sediment barrier system in an open coast location.

The type of geomorphological development seen at Porlock has been noted for coastal shingle systems elsewhere (e.g. west coast of Newfoundland, Canada). Although other UK systems probably developed and are developing in a similar manner, Porlock provides the only fully documented example of a nationally important coastal geomorphological system which has undergone catastrophic failure and subsequent evolution following sediment inhibition.

Biological

A large part of this site is lower saltmarsh dominated by glasswort *Salicornia europaea* and annual sea-blite *Suaeda maritima.* Other plant species associated with this habitat include sea aster *Aster tripolium*, sea purslane *Atriplex portulacoides*, common saltmarsh-grass *Puccinellia maritima* and spear-leaved orache *Atriplex hastata*. On areas of slightly higher saltmarsh, sea plantain *Plantago maritima*, sea arrowgrass *Triglochin maritima* and sea milkwort *Glaux maritima* also occur.

On shingle areas which are not inundated by salt water a variety of vegetation communities have established. Where the shingle ridge itself is most stable, saxicolous lichens cover the pebbles. Amongst the species which occur here are *Rinodina aspersa* which is nationally rare and three other species which are nationally scarce: *Buellia subdisciformis*, *Caloplaca arnoldii* and *Lecanora subcarnea.* On the back face of the ridge and on shingle deposited to the landward side of it communities of higher plants are found. These include swards with coastal species such as upright chickweed *Moenchia erecta*, sea storksbill *Erodium maritimum*, bird's-foot clover *Trifolium ornithopodioides* and subterranean clover *Trifolium subterraneum*. Also found here is the nationally scarce Babington's leek *Allium ampeloprasum ssp. babingtonii*.

The site is visited regularly by grey heron *Ardea cinerea,* little egret *Egretta garzetta* and shelduck *Tadorna tadorna*. Small winter flocks of lapwing *Vanellus vanellus*, curlew *Numenius arquata*, teal *Anas crecca* and shelduck occur on the site as a whole. The site is also visited by a very wide range of migratory species.

Other information:

Part of this site was previously notified as Porlock Marsh SSSI. Saltmarsh and coastal vegetated shingle are both priority habitats in the UK Biodiversity Action Plan. Saltmeadows (saltmarsh) and coastal perennial vegetation of stony banks (vegetated shingle) are both habitats listed on Annex 1 of the EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (92/43/EEC).