

COUNTY: Cornwall

SITE NAME: BOSCASTLE TO WIDEMOUTH

DISTRICT: North Cornwall

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

Local Planning Authority: Cornwall County Council, North Cornwall District Council

National Grid Reference: SX 092916–SS 194018      Area: 639 (ha) 1579 (ac)

Ordnance Survey Sheet 1:50,000: 190      1:10,000: SX 09 SE, SX 19 SW,  
NW, NE, SS 10 SE

Date Notified (Under 1949 Act): 1972

Date of Last Revision: –

Date Notified (Under 1981 Act): 1990

Date of Last Revision: –

Other Information:

Within an Area of Outstanding Natural Beauty and North Cornwall Heritage Coast; part owned by the National Trust; includes 5 Geological Conservation Review sites and is noted in “A Nature Conservation Review” Ed. D A Ratcliffe (Cambridge University Press 1977). Site amended by extensions and deletions.

### **Description and Reasons for Notification:**

This site lies on the North Cornwall coast and comprises a 12 mile section of cliffs and coastal habitats between Boscastle and Widemouth. The cliffs exhibit classic geological exposures of Namurian rocks and Variscan structures; the outstanding biological interest includes the unique Dizzard Oak woodland, maritime heaths and intertidal zones. Five Geological Conservation Review Localities occur within the site:

**1. Widemouth to Crackington** – This site is comprised of extensive coastal exposures, where the typically developed basinal Namurian of south-west England is clearly exposed. The entire Namurian represented by the Crackington formation is visible within the site, and the presence of rare goniatites has been vital in unravelling the complicated local stratigraphy. The section provides an excellent display of the sedimentary features associated with shallow water turbidites, and is of considerable interest for its spectacular structural features. An outstanding site for studies of palaeogeography, sedimentation and tectonics.

**2. Widemouth to Saltstone Strand** – This coastal section lies within the above site and provides exposures of a sequence of folded and faulted sandstones of the Bude Formation (in the north) and shales and sandstones of the Crackington Formation (in the south). These rocks were deformed during the Variscan mountain building episode, towards the end of the Carboniferous Period. At the northern end of this section, fold structures are generally upright but further south become steeply inclined around Saltstone. The change in style of the fold marks an important structural boundary between a region of upright folds to the north and a region of inclined or flat-lying folds, to the south, which is a major feature of the geology of South West England. At this locality the boundary has been the subject of very detailed study and its interpretation is of great significance in understanding the geological evolution of the region.

**3. Millook to Foxhole Point** – This coastal section provides spectacular cliff exposures of folded sandstones and shales of the Crackington Formation and contains the 100 metre high cliff at Bridwell Point which is used to illustrate fold structures in many geology textbooks. The principal interest of this site lies in the flatlying chevron folds which are superbly exposed in the cliffs and have been studied in great detail. Small structures, such as veins, fractures and cleavage, are also well displayed and provide a wealth of detailed

information about the processes of rock deformation responsible for producing the folds and related minor structures. The interpretation of these structures is crucial to an understanding of the geological evolution of South West England; structures of this type are dominant throughout South Cornwall and Devon and contrast markedly with the upright folds characteristic of North Cornwall and Devon.

**4. Rusey Cliff to Buckator** – Cliff and foreshore rock outcrops within this expose geological structures of importance in the interpretation of the geology of South West England. A complex, major dislocation, the Rusey Fault zone passes through the centre of the site and separates rock sequences of different character. To the north, sandstones and slates of the Crackington Formation represent the southernmost edge of the structural domain known as the Culm Synclinorium, occupying most of north Cornwall and Devon. To the south, well seen at Buckator, are dark, iron-rich slates which extend southwards beyond Boscastle. Across the fault zone, an important change in structural style occurs, with angular chevron-style folds to the north giving way to very tight but more sinuous folds to the south. This fault separates two of the major structural units of South West England and this site is thus critical in linking the geological histories across this major dislocation.

**5. Boscastle** – The coastal cliffs and outcrops in this site provide accessible exposures of contorted Carboniferous slates, siltstones and sandstones of the Crackington Formation. The complex structures found here were the subject of a classic study more than thirty years ago which led to much further study of the geological structure of this region. A particularly well-known feature of this site is the superb exposure of refolded folds found on Penally Point which also appears as an illustration in many textbooks. The accessibility of this site and the good, three-dimensional nature of the exposures make it ideal for detailed examination and measurement of major and minor structures including folds, faults, fractures, cleavage and veins. The outcrops have played an important part in establishing the complex structural history of South West England and have helped to resolve a number of related controversies. Together with sites at Millook and Bude, this locality enables structures in the ‘Culm’ and South West England to be examined, compared and correlated.

A wide range of habitats occurs within this site, the outstanding feature being the dwarf Oak *Quercus spp.* woodland at Dizzard Point. This has developed in an exposed situation, partly on unstable cliffs, forming a dense, windclipped canopy between 1 and 8 metres high. The woodland is dominated by Sessile Oak *Quercus petraea* with Pendunculate Oak *Q. robur*, Rowan *Sorbus aucuparia* and the rare Wild Service Tree *S. torminalis*. The ground flora is varied; moister parts support a base-rich plant community of Ramsons *Allium ursinum*, Lords and Ladies *Arum maculatum*, Meadowsweet *Filipendula ulmaria* and associates. Elsewhere a heathy ground flora association with Ling *Calluna vulgaris* and Bilberry *Vaccinium myrtillus* predominates with frequent Cow Wheat *Melampyrum pratense*. The occurrence of Hay-scented Fern *Dryopteris aemula* is of particular interest.

This woodland is of international importance for its rich lichen communities in particular the “Lobarion” characterised by the Lungwort lichen *Lobaria pulmonaria*. Several nationally rare associates occur: *Lobaria scrobiculata*, *Parmeliella plumbea* and *P. atlantica*, the latter known from only two localities in South West England. The nationally rare foliose lichen *Pseudocyphellaria crocata*, which occurs here, is recorded from only one other site in England and Wales. Several other lichen communities are well-represented at the Dizzard and include the following rarities: *Bombyliospora pachycarpa*, *Graphina ruiziana*, *Lecidea carollii*, *Melaspilea ochrothalmia* and *Pannaria rubiginosa*.

The remainder of the coast is of national importance; the coastal slopes supporting a mosaic of maritime grassland, heathland and scrub. Maritime western heath is well represented with Ling, Bell Heather *Erica cinerea* and Western Gorse *Ulex gallii* forming a dense canopy. Associated species include Sheep’s-bit *Jasione montana*, Lousewort *Pedicularis sylvatica*, Tormentil *Potentilla erecta* and Dodder *Cuscuta epithimum*. The following plants

of county interest have also been recorded: Madder *Rubia peregrina*, Dyer's Greenweed *Genista tinctoria*, Musk thistle *Carduus nutans* and Heath Pearlwort *Sagina subulata*. Throughout the site there are fine examples of "waved" heath characteristic of exposed coastal sites, for example at Cleave near Crackington Haven. To seaward the heath gives way to maritime grassland dominated by Red Fescue *Festuca rubra* with Kidney Vetch *Anthyllis vulneraria*, Thrift *Armeria maritima*, Spring Squill *Scilla verna* and Wild Carrot *Daucus carota*. These species extend onto the cliffs and unstable slopes where Scurvy Grass *Cochlearia* spp., Rock Samphire *Crithmum maritimum*, and the nationally scarce Golden Samphire *Inula crithmoides*, Lanceolate Spleenwort *Asplenium billotii* and Rock Sea Lavender *Limonium binervosum* also occur. The coast supports one Red Data Book plant species: Babington's Leek *Allium ampeloprasum* spp. *babingtonii*.

Coastal scrub communities are locally dominated by European Gorse *Ulex europaeus*, Blackthorn *Prunus spinosa* and Bracken *Pteridium aquilinum*. Several small streams and wet flushes traverse the coastal fringe. These support a tall herb community of Hemlock Water Dropwort *Oenanthe crocata*, Yellow Flag *Iris pseudacorus*, sedge and grasses including small stands of Reed Canary Grass *Phalaris arundinacea*. Several uncommon plants occur along these wet zones, notably: Royal Fern *Osmunda regalis*, Bristle Club-rush *Isolepis setacea*, Slender Club-rush *I. cernua*, Brookweed *Samolus valerandi* and Wood Vetch *Vicia sylvatica*. An important feature of the site is the zonation from seacliff vegetation through maritime grassland, heath and scrub into woodland communities. This is particularly well illustrated along the valleys at Crackington Haven, Cleave, the Dizzard and Millook.

Bryophytes have been well studied, with a total of 205 species recorded within the site. The Strangles is of particular importance with the two nationally rare mosses *Campylopus polytrichoides* and *Coscindonon cibrosus*, growing on shaley rocks.

In general the fauna of this site has been less well-studied but the coast is known to support a rich invertebrate fauna. One Red Data Book butterfly, the High Brown Fritillary *Argynnis adippe* is frequently recorded; together with Grayling *Hipparchia semele*, Marbled White *Melanargia galathea*, Small Pearl-bordered Fritillary *Boloria selene*, Silver-washed Fritillary *Argynnis paphia* and Green Hairstreak *Callophrys rubi*. Marsh Fritillary *Eurodryas aurinia* occurs along wetter flushes. Five nationally scarce moths have been recorded: Scarlet Tiger *Callimorpha dominula*, Sand Dart *Agrotis ripae*, Crescent Dart *A. trux*, Devonshire Wainscot *Mythimna putrescens* and the Northern Rustic *Standfussiana lucerneae*.

In addition to the Lepidoptera, four locally important species of Diptera occur including *Sarcophila latifrons*. A nationally rare burying beetle *Necrophorus interruptus*, and six locally important species of Coleoptera have been recorded; together with the solitary wasp *Crabro carifrons* and the Grey Mining Bee *Andrena cineraria* which is of local importance. Among the other insect groups two nationally important species occur: a squash bug *Enoplops scapha*, and a weevil *Acalles ptinoides*. The nationally scarce coastal woodlouse *Trichoniscoides saeroeensis* has also been recorded here. Two molluscs, *Potentilla subvirens* a nationally important terrestrial species, and Draparnaud's Glass Snail *Oxychilus draparnaldi* which is of local importance, also occur.

Several uncommon bird species breed regularly including: Peregrine *Falco peregrinus*, Raven *Corvus corax*, Razorbill *Alca torda*, Guillemot *Uria aalge* and Oystercatcher *Haematopus ostralegus*.

The intertidal area is important for breeding Grey Seals *Halichoerus grypus* with a well established colony at Beeny Cliffs. Badgers *Meles meles* utilise the coastal fringe with several traditional setts.