

**CYNGOR CEFN GWLAD CYMRU  
COUNTRYSIDE COUNCIL FOR WALES**

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

**ANGLESEY**

**GLANNAU RHOSCOLYN**

<b><u>Date of Notification:</u></b>	1961, 1980, 1985, 1987, 2001
<b><u>National Grid Reference:</u></b>	SH 254776 to 289750
<b><u>O.S. Maps:</u></b>	1:50,000 Sheet number: 114 1:10,000 Sheet number: SH27 NE & SE
<b><u>Site Area:</u></b>	146.7 ha

**Description:**

Extending along the west coast of Holy Island, Anglesey for approximately 6.5 km (from Porthygaran to Silver Bay) and covering an area of approximately 157 ha, Glannau Rhoscolyn SSSI is an area rich in biological and geological features. This site is selected for its botanical, ornithological and geological features and has substantial marine biological interest.

**Geological Interest**

The coastal exposures around Rhoscolyn exhibit some of the finest examples of polyphase fold structures known in southern Britain and are amongst the most intensively studied sites of structural geological interest in the British Isles. The enormous wealth of minor structures exhibited by these exposures of Precambrian rocks has been the subject of numerous detailed investigations which make them of crucial importance to our understanding of the deformation history of the Mona Complex. The site is the type locality of the Rhoscolyn Formation, the highest of the three units comprising the South Stack Group and also includes the contact between the South Stack Group and the overlying New Harbour Group where the controversial concept of a major tectonic discordance between the two units was originally invoked. Studies of the deformed sedimentary sequence exposed in and around the famous Rhoscolyn Anticline have enabled the correlation of stratigraphical units across Holy Island and demonstrated the dramatic south-eastward thinning of the Holyhead Formation, a unit formerly called the Holyhead Quartzite. The recognition of sedimentary 'way-up' evidence from this section was important in refuting the hypothesis of large-scale recumbent folding of the Mona Complex, as proposed by Greenly early in the 20th Century and in establishing that the stratigraphical succession is 'right-way-up'.

**Botanical Interest**

The majority of habitat within Glannau Rhoscolyn SSSI consists of lowland and coastal heathland together with several rush pasture and mire communities associated with the habitat. The area demonstrates an important gradient of variation from the distinctive maritime heathland present on the upper slopes and summits of coastal cliffs and bluffs, through to dry heathland,

then wet heathland with an abundance of moisture-loving plants and finally to rush pasture and mire.

At Glannau Rhoscolyn, maritime heath with abundant heather *Calluna vulgaris* and bell heather *Erica cinerea* is extensive over the seaward fringes of the site. In several places, but most notably in the vicinity of Porthygaran to the north of the site, the bell heather is reduced in abundance and replaced by cross-leaved heath *Erica tetralix*, forming a distinct maritime heath sub-community. The site contains the most extensive area of this type of sub-community in the West Gwynedd Area of Search. Four such sub-communities of maritime heath have been identified and all are represented at Glannau Rhoscolyn. Farther inland, dry heath predominates, characterised by heather *Calluna vulgaris* and western gorse *Ulex gallii*. Spring squill *Scilla verna* is particularly abundant throughout most areas of dry heath on the site along with a varied and often abundant lichen flora. Heath grass *Danthonia decumbens* characterises a small area of dry heath to the north of the rock outcrops at Pant yr Hyman. In the deeper, humic soils near to Silver Bay, wet heath, characterised by cross-leaved heath *Erica tetralix* and bog moss *Sphagnum compactum*, occupies small areas and there are frequent flushes along the interface between the coastal edge of the heath and grassland associations and the extensive, gently sloping rocky shoreline. These are characterised by thrift *Armeria maritima*, brookweed *Samolus valerandi*, sea milkwort *Glaux maritima*, bog pimpernel *Anagallis tennela*, marsh pennywort *Hydrocotyle vulgaris*, common yellow sedge *Carex demissa* and occasionally common spike-rush *Eleocharis palustris*.

At Pant yr Hyman, a series of rocky ridges support a mosaic of acidic grassland and coastal heathland where sheep's fescue *Festuca ovina*, bent grasses *Agrostis spp.* and early hair-grass *Aira praecox*, together with the ericaceous shrubs, heather *Calluna vulgaris* and bell heather *Erica cinerea*, are abundant. Other associated species include spring squill *Scilla verna*, English stonecrop *Sedum anglicum*, heath pearlwort *Sagina subulata* and bird's foot *Ornithopus perpusillus*. It is on these rocky ridges and on similar ones at Ty'n y Mynydd (Porthygaran) that the Red Data Book species spotted rock rose *Tuberaria guttata* occurs. In this location, the species is on the edge of its geographical range. Only nine populations of the spotted rockrose are known in the UK; in addition to the two within Glannau Rhoscolyn SSSI, a further six locations are also found on Anglesey with the remaining site on Pen Llŷn.

A number of unusual mire associations have also been recorded as a part of the heathland system. Several perched salt-marsh rush *Juncus gerardii* stands add to the variety of the coastal communities towards the north of the site, near Porthygaran, along with an extensive array of communities including soakaway characterised by Marsh St. John's Wort *Hypericum elodes* and bog pondweed *Potamogeton polygonifolius*, sea club-rush *Scirpus maritimus* swamp, inundation grassland (including red fescue *Festuca rubra*, creeping bent *Agrostis stolonifera* and silverweed *Potentilla anserina*) and a stand of common couch *Elymus repens* sand dune. Farther south, near Borthwen, a stand of black bog rush *Schoenus nigricans*/blunt-flowered rush *Juncus subnodulosus* mire, with unusually frequent sea rush *Juncus maritimus* is present, as is a particularly distinctive stand of sharp-flowered rush *Juncus acutiflorus* / marsh bedstraw *Galium palustre* mire with a high cover of marsh pennywort *Hydrocotyle vulgaris* and common reeds *Phragmites*. A stand of the same community (*Juncus acutiflorus* / *Galium palustre*) is also found within the heathland communities near to Silver Bay, but with a high cover of sharp-flowered rush *Juncus acutiflorus*, making it a different sub-community to that found near Borthwen. Also within the Silver Bay heathland is a small area of mire characterised by abundant purple moor-grass *Molina caerulea*, tormentil *Potentilla erecta* and sweet vernal grass *Anthoxanthum*

*odoratum*.

Maritime grassland is a relatively small component of the heathland areas but dominates the coastal slope and cliff top areas of the site between Pant yr Hyman and Borthwen. The habitat in this area is dominated by fescues, including red fescue *Festuca rubra* but there remains a variety of species present typical of maritime grassland. Species present include sea plantain *Plantago maritima*, buck's-horn plantain *Plantago coronopus* and Yorkshire fog *Holcus lanatus*. The site also has examples of maritime *therophyte* communities, characterised by thrift *Armeria maritima* and sea mouse-ear *Cerastium diffusum*.

### **Ornithological Interest**

Two Annex 1 bird species breed within Glannau Rhoscolyn SSSI, the chough *Pyrhocorax pyrrhocorax*, for which the site is also selected, and the peregrine *Falco peregrinus*. Other species of interest are breeding shag *Phalacrocorax aristotelis*, raven *Corvus corax* and kestrel *Falco tinnunculus* which nest on the cliffs and populations of whitethroat *Sylvia communis*, wheatear *Oenanthe oenanthe* and stonechat *Saxicola torquata*, which are supported by the large areas of maritime heath and scrub.

### **Marine Interest**

The site is of marine biological interest for its diverse algal communities and the presence of specialised communities such as bedrock overhangs. Exposure to waves and tidal currents varies markedly across the site, allowing a wide range of algal species to be represented in a relatively small area. In the sheltered sandy bay of Borthwen the eelgrass *Zostera marina* is found and the rugged bedrock towards the mouth of the bay supports dense communities of the foliose seaweed species including curvies *Laminaria hyperborea*, *Mastocarpus stellatus*, serrated wrack *Fucus serratus*, egg wrack *Ascophyllum nodosum*, bladder wrack *Fucus vesiculosus*, channel wrack *Pelvetia canaliculata* and spiral wrack *Fucus spiralis*. Most of the bedrock cliffs of the site are exposed to strong swells from the south and west and as a result the band of rock influenced by sea-spray (the splash zone) is extensive. Lichens recorded from this zone include sea ivory *Ramalina siliquosa*, black shields *Leconora atra*, *Xanthoria parietina*, black tar lichen *Verrucaria maura*, *Caloplaca thallicola* and *Ochrolechia parella*. The south-facing cliffs are dominated by barnacles, brown seaweed and red algal turfs. As wave and tide-exposure increases towards the west many seaweeds are unable to persist and consequently the cliffs around Rhoscolyn Head are dominated by mussels and barnacles, with lower shore communities of kelp *Laminaria digitata*, dabberlocks *Alaria esculenta* and thongweed *Himantalia elongata*.

Numerous small bedrock overhangs on the lower shore around Borthwen support the breadcrumb sponge *Halichondria panicea*, the sponge *Hymeniacidon perleve*, the hydroid *Dynamena pumila*, the bryozoans *Scrupocellaria reptans* and *Bugula fulva* and the ascidian *Sidnyum turbinatum*.

### **Remarks:**

This site supports vegetation assignable to 'Dry heaths', 'Vegetated sea cliffs of the Atlantic and Baltic coasts' and 'Northern Atlantic wet heaths with *Erica tetralix*'. These habitat types are listed on Annex 1 of the EC Habitats and Species Directive (Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna).

The chough *Pyrrhocorax pyrrhocorax* and the peregrine *Falco peregrinus* are both listed on Annex 1 of the EC Birds Directive (Directive EC/79/409 on the Conservation of Wild Birds).

This site is a part of Glannau Ynys Gybi Special Protection Area (pSPA) for chough, under the EC Birds Directive 1979.

This site is part of Glannau Ynys Gybi Special Area of Conservation.

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