

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

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

POWYS

**RHOS GOCH
(RHOS GOCH COMMON)**

<u>Date of Notification:</u>	1954, 1983, 1993
<u>National Grid Reference:</u>	SO 196484
<u>O.S. Maps:</u>	1:50,000 Sheet number: 148 1:25,000 Sheet number: SO 14 and SO 24
<u>Site Area:</u>	67.3 ha

Description:

Rhos Goch, situated about 2 miles north-east of Painscastle, is a nationally important mire site, being one of the very few extensive areas of lowland mire remaining in eastern Wales. Such mires are now rare in Britain and Ireland as a result of peat extraction and agricultural reclamation. The area supports a number of nationally and locally uncommon plants and invertebrates.

The site comprises a central area of raised mire with a wooded lagg (edge vegetation) zone on three sides. On the south-west side, however, there is a gradation from raised mire, through a transitional mire zone, into an extensive area of swamp vegetation and finally into seasonally inundated pasture. The raised mire is particularly notable for a well-developed hummock and hollow network of a type found at only one other raised mire in Britain. The mire overlies deep nutrient-poor amorphous peat and it is likely to have developed from a shallow post-glacial lake situated in the valley bottom. Rhos Goch lies on the watershed of two tributaries of the River Wye, the Arrow which flows north-eastwards into Herefordshire and the Bachawy which flows south-westwards through Painscastle.

The raised mire comprises a pool and hummock complex. Some of the pools may have arisen naturally, but others have undoubtedly been created by small-scale peat extraction in the past. Two main bog pool communities are present. The first is characterised by carpets of the bog-mosses *Sphagnum auriculatum* and *S. cuspidatum*, along with frequent common cottongrass *Eriophorum angustifolium*, round-leaved sundew *Drosera rotundifolia* and cross-leaved heath *Erica tetralix*. The bog-moss *Sphagnum subnitens* occurs locally as does bog asphodel *Narthecium ossifragum*. Deeper pools contain bog pondweed *Potamogeton polygonifolius* and lesser bladderwort *Utricularia minor*. A second type of bog pool is common nearer to the edges of the raised mire; here *Sphagnum recurvum*, *S. cuspidatum* and *S. subnitens* comprise the bog-moss carpet, along with frequent cottongrass, cross-leaved heath and purple moor-grass *Molinia caerulea*. Heather *Calluna vulgaris* and hare's-tail cottongrass *Eriophorum vaginatum* are locally prominent. Other associates include the hair-mosses *Polytrichum alpestre* and *P. commune*, white sedge *Carex curta* and the moss *Aulacomnium palustre*. The ridges and hummocks within

the raised mire are generally dominated by heather and cross-leaved heath with frequent common cottongrass, hare's-tail cottongrass, purple moor-grass, the lichen *Cladonia impexa* and a range of bog-mosses, including *Sphagnum papillosum*, *S. capillifolium* and *S. subnitens*. The locally uncommon royal fern *Osmunda regalis* occurs on some of the pool-sides within the raised mire.

The transition between the raised mire and swamp zone to the south-west is characterised by abundant bottle sedge *Carex rostrata* and a range of other poor-fen species, such as marsh cinquefoil *Potentilla palustris*, common sedge *Carex nigra*, water horsetail *Equisetum fluviatile*, marsh pennywort *Hydrocotyle vulgaris*, sharp-flowered rush *Juncus acutiflorus* and soft rush *J. effusus*. White sedge, common cottongrass, and the bog-mosses *Sphagnum recurvum* and *S. squarrosum* are also prominent; these species are absent from the slightly more base-rich swamp communities nearby.

The main swamp community is also dominated by bottle sedge, either in dense species-poor stands or accompanied by a wide range of common associates such as water horsetail, bogbean *Menyanthes trifoliata*, marsh cinquefoil, common spike-rush *Eleocharis palustris*, bog pondweed, marsh-marigold *Caltha palustris* and marsh pennywort. The locally uncommon greater spearwort *Ranunculus lingua* and bladderwort *Utricularia australis* also occur within the bottle sedge swamp. The other major swamp zone community is dominated by soft rush accompanied by common marsh-bedstraw *Galium palustre*, marsh pennywort, marsh cinquefoil, gipsywort *Lycopus europaeus* and common duckweed *Lemna minor*. Other common associates include creeping bent *Agrostis stolonifera*, marsh-marigold, ragged-robin *Lychnis flos-cuculi* and marsh speedwell *Veronica scutellata*. A number of other swamp communities are prominent locally, these are dominated variously by greater tussock-sedge *Carex paniculata*, lesser pond-sedge *Carex acutiformis*, water horsetail, common spike-rush and greater bulrush *Typha latifolia*.

Beyond the swamp zone at the south-western end of the common lies an area of seasonally inundated pasture characterised by abundant creeping bent and common sedge, with frequent marsh pennywort, lesser spearwort *Ranunculus flammula*, common marsh-bedstraw, marsh ragwort *Senecio aquaticus* and the moss *Calliergon cuspidatum*. Where poaching by stock has kept the sward open species such as lesser marshwort *Apium inundatum*, floating club-rush *Eleogiton fluitans* and water-purslane *Lythrum portula* are common. The wettest hollows support bladderwort and the nationally uncommon pillwort *Pilularia globulifera*.

The lagg zone of the raised mire supports extensive areas of carr woodland. Downy birch *Betula pubescens* is generally the dominant tree here and there is considerable encroachment of this species onto the mire itself. In the woodland proper rusty willow *Salix cinerea* subs. *oleifolia* is the most common woody associate, although alder *Alnus glutinosa* is prominent locally and rowan *Sorbus aucuparia* and goat willow *Salix caprea* are scattered throughout, along with bramble *Rubus fruticosus* agg., honeysuckle *Lonicera periclymenum* and wild roses *Rosa* spp.. The field layer is characterised in places by common reed *Phragmites australis* along with rough meadow-grass *Poa trivialis*, lady fern *Athyrium filix-femina*, common valerian *Valeriana officinalis* and the moss *Calliergon cuspidatum*. These species are generally accompanied by purple moor-grass and the bog-moss *Sphagnum recurvum*, but these species are replaced by marsh-marigold, water mint *Mentha aquatica* and hemp agrimony *Eupatorium cannabinum* where the ground water is more base-rich. Elsewhere, beneath the birch carr, purple moor-grass is dominant along with species such as marsh cinquefoil and bog-moss *Sphagnum recurvum*. At the northern end of the birch carr, greater tussock-sedge dominates the ground flora. Purple

moor-grass is rare here, but a wide range of other species is present, including common marsh-bedstraw, lady fern, the bog-mosses *Sphagnum recurvum* and *S. squarrosum*, marsh cinquefoil, common valerian, Yorkshire-fog *Holcus lanatus*, the mosses *Calliergon cuspidatum* and *Eurhynchium praelongum*, narrow buckler-fern *Dryopteris carthusiana* and royal fern. Within the swamp zone dense patches of rusty willow are developing in the areas dominated by soft rush.

The common is bordered by wet pastures. These are situated below a major springline where the Old Red Sandstone meets the underlying Silurian shale. Base-rich flushes around these springs are characterised by an abundance of small-sedges such as carnation sedge *Carex panicea*, long-stalked yellow-sedge, *C. lepidocarpa*, tawny sedge *C. hostiana*, flea sedge *C. pulicaris* and glaucous sedge *Carex flacca* and a wide range of associates, including common butter-wort *Pinguicula vulgaris*, the moss *Drepanocladus revolvens*, devil's-bit scabious *Succisa pratensis*, few-flowered spike-rush *Eleocharis quinqueflora*, bulbous rush *Juncus bulbosus*, quaking-grass *Briza media*, marsh arrow-grass *Triglochin palustris*, marsh valerian *Valeriana dioica* and locally, marsh lousewort *Pedicularis sylvatica*, bog pimpernel *Anagallis tenella* and northern marsh-orchid *Dactylorhiza purpurella*. Much of the pasture-land comprises fen-meadow with an abundance of purple moor-grass, along with sharp-flowered rush and sweet vernal-grass *Anthoxanthum odoratum* and a wide range of associates, including tormentil *Potentilla erecta*, devil's-bit scabious, meadow thistle *Cirsium dissectum*, flea sedge, heath woodrush *Luzula multiflora*, red fescue *Festuca rubra*, velvet bent *Agrostis canina*, heath spotted-orchid *Dactylorhiza maculata* subsp. *ericetorum*, marsh orchids *Dactylorhiza* sp., tawny sedge and the mosses *Calliergon cuspidatum* and *Aulacomnium palustre*. Areas of similar vegetation occur on dry hummocks and ridges at the southern end of the common. Here creeping willow *Salix repens* occurs at its only known Radnorshire locality. The other main fen-meadow community is dominated by sharp-flowered rush. Characteristic associates include common marsh-bedstraw, Yorkshire-fog, purple moor-grass and greater bird's-foot-trefoil *Lotus uliginosus*. Where grazing pressure is light a tussocky sward of purple moor-grass has developed. Characteristic associates here include wild angelica *Angelica sylvestris*, soft rush, marsh bedstraw and common valerian. Areas of drier pasture occur locally above the springline, where the sward comprises common bent *Agrostis capillaris*, sweet vernal-grass, crested dog's-tail *Cynosurus cristatus* and heath-grass *Danthonia decumbens*, along with herbs such as common bird's-foot-trefoil *Lotus corniculatus*, tormentil, betony *Stachys officinalis* and devil's-bit scabious. Within the fen-meadows at Portway there is a raised area of heathy grassland characterised by purple moor-grass, wavy hair-grass *Deschampsia flexuosa*, mat-grass *Nardus stricta*, common sedge, tormentil, heather, bilberry *Vaccinium myrtillus* and cowberry *Vaccinium vitis-idaea*.

The site hosts an invertebrate community of outstanding interest, with the range of habitat types and management treatments enabling a wide variety of wetland invertebrate communities to occur. Included within these are an impressive range of rare species. The scarce silver Y moth *Syngrapha interrogationis* is present and the marsh fritillary butterfly *Eurodryas aurinia* has also occurred.

An outstanding wetland beetle fauna reflects the diversity of vegetation structures on the site. In open muddy areas the nationally scarce ground beetle *Blethisa multipunctata* occurs in profusion, whilst in more well-vegetated mixed fen, the nationally rare weevil *Hypera diversipunctata* occurs at one of only four post-1970 recorded sites in the UK, this being its only known Welsh locality. The presence of willow and birch carr adds greatly to the diversity of invertebrate

species with, for example, the scarce longhorn beetle *Saperda scalaris* being restricted to carr areas on the site where the larvae develop in dead and decaying wood.

The mollusc fauna includes the marsh whorl snail *Vertigo antivertigo*, which is indicative of undisturbed fenland. The presence of a range of wetland molluscs allows for the occurrence here of a diverse assemblage of snail-killing flies, including the nationally notable *Renocera striata* and the nationally rare *Tetanocera frevi*. The presence of shallow pools and runnels of a wide spectrum of acidity supports a correspondingly broad range of freshwater invertebrates. The dragonflies are typically diverse, with scarcer species including the keeled skimmer *Orthetrum coerulescens* and the scarce blue-tailed damselfly *Ischnura pumilio*.

Rhos Goch provides a variety of breeding and feeding areas for a wide range of bird species, including snipe and lapwing.

Remarks:

Part of the site is registered as common land.

45 hectares of the site are owned by the Countryside Council for Wales and were declared a National Nature Reserve in 1987.

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