

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

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

**POWYS**

**WAEN RYDD**

**Date of Notification:** 2001

**National Grid Reference:** SN 875452

**O.S. Maps:** 1:50,000 Sheet number: 147  
1:10,000 Sheet number: SN 84 SE, SN 84 NE

**Site Area:** 91.3 ha

**Description:**

Waen Rydd is of special interest for its extensive areas of lowland bog and associated wet heath, marshy grassland, mire and flush communities. The site also includes a section of the Afon Cledan, a small tributary of the Afon Irfon, which supports an important population of juvenile Atlantic salmon *Salmo salar*.

Waen Rydd is situated in a broad valley bottom at an altitude of 200-230 m, approximately 12 km south of Llanwrtyd Wells. The underlying geology consists of black graptolitic shales from the Ordovician, Caradoc series, which contain fine-grained pyrites. The weathering of this mineral gives rise to acidic groundwater. The solid geology is overlain by extensive fluvio-glacial deposits. In hollows in the north of the site, where drainage is impeded, peat bog has developed and despite a history of burning, peat cutting and some drainage, pockets of active bog remain. Within the bog area there are also several elongated ridges of solid rock which are characterised by thin dry soils supporting acidic grassland. South of the Cledan the peat is thinner, supporting wet heath rather than bog vegetation. This grades into acidic grassland on the gently sloping ground and there are numerous springs and flushes. Similar vegetation extends up the valley of the Nant Cefnesgair. Finally, the small field beyond the railway in the north-west corner of the site supports a wide spectrum of plant communities ranging from rush-pasture, mire and short-sedge flushes to small areas of species-rich dry acid grassland.

Stratigraphic studies of the bog have revealed up to 7.4 m of peat at one location and the sequence of plant remains preserved in the peat suggest that the site is a modified example of a raised bog, a now rare type of lowland peatland which depends largely on rainfall as a source of water and nutrients.

The bog vegetation is characterised by a high frequency of hare-tail cottongrass *Eriophorum vaginatum* and bog moss *Sphagnum recurvum* amongst abundant purple moor-grass *Molinia caerulea* with cross-leaved heath *Erica tetralix*, heather *Calluna vulgaris*, bilberry *Vaccinium myrtillus*, common cottongrass *Eriophorum angustifolium*, wavy hair-grass *Deschampsia flexuosa* and narrow buckler-fern *Dryopteris carthusiana*.

This vegetation often grades into wet heath, which shares many of the above species but is

recognizable by the presence of deergrass *Scirpus cespitosus* and an absence of hare=s-tail cottongrass. Other species include tormentil *Potentilla erecta*, heath rush *Juncus squarrosus* and heath milkwort *Polygala serpyllifolia*. A wide range of mosses and liverworts occur in the wet heath including *Sphagnum recurvum*, *S. subnitens*, *S. tenellum*, *Pleurozium schreberi*, *Hypnum jutlandicum*, *Kurzia pauciflora* and *Odontoschisma sphagni*. Associated with the bog and wet heath communities there are also some very wet areas dominated by purple moor-grass which lack both deergrass and hare=s-tail cottongrass but which retain a high cover of bog moss, heather and cross-leaved heath.

Within the bog and wet heath in the northern area there are some small bog pools which are typically colonised by a dense mat of bog moss *Sphagnum recurvum* with frequent common and hare=s-tail cotton-grasses. Round-leaved sundew *Drosera rotundifolia* is locally frequent, growing with the bog moss especially around the margins of these pools.

Elsewhere in this northern area the vegetation has been modified under the influence of past burning, peat cutting and drainage. These areas tend to be dominated either by dense tussocky purple moor-grass or by rushes *Juncus* spp.. In some places sharp-flowered rush *Juncus acutiflorus* is accompanied by a variety of characteristic associates including common marsh bedstraw *Galium palustre*, ragged-robin *Lychnis flos-cuculi*, lesser scullcap *Scutellaria minor*, greater bird=s-foot-trefoil *Lotus uliginosus*, whorled caraway *Carum verticillatum* and, in one area, greater tussock-sedge *Carex paniculata*. In the small north-western field, this type of rush pasture occasionally approaches a swamp community in the wettest areas, with bogbean *Menyanthes trifoliata*, water horsetail *Equisetum fluviatile* and marsh pennywort *Hydrocotyle vulgaris*.

Associated with the wet heath on the southern half of the site in particular, there are a series of wet runnels and flushes. Some of the former are dominated by bottle sedge *Carex rostrata*, with other species, including sharp-flowered rush, bogbean, bog pondweed *Potamogeton polygonifolius*, carnation sedge *Carex panicea*, common yellow sedge *C. demissa*, tawny sedge *C. hostiana*, common cottongrass, round-leaved sundew and a high cover of the moss, *Campylium stellatum*. Other runnels are characterised by a different assemblage, often found in old drainage channels. Here the shallow open water is colonised by marsh St John=s-wort *Hypericum elodes*, bog pondweed, common cottongrass, purple moor-grass, bulbous rush *Juncus bulbosus*, lesser spearwort *Ranunculus flammula*, common yellow sedge and carnation sedge. White beak-sedge *Rhynchospora alba* occurs in this community in the southern arm of the site, where there is also localised base-rich flushing, with abundant brown moss *Drepanocladus revolvens* alongside species such as marsh valerian *Valeriana dioica*, marsh lousewort *Pedicularis palustris* and whorled caraway.

Throughout the site there are patches of more acid flush, supported by the high water table. These areas are often species-poor but are characterised by a luxuriant carpet of bog mosses *S. recurvum* and *S. palustre* beneath either dominant sharp-flowered rush or soft rush *Juncus effusus*. There are also a few areas of short-sedge dominated acid flush, such as that found in the north-western field, which are characterised by species such as star sedge *Carex echinata*, common cottongrass, bog asphodel *Narthecium ossifragrum*, marsh violet *Viola palustris*, tormentil and bulbous rush amongst abundant bog moss *Sphagnum auriculatum* var. *auriculatum* and *S. papillosum*.

The north-western field also supports stands of purple moor-grass dominated mire with a tall

herb element, including wild angelica *Angelica sylvestris* and marsh thistle *Cirsium palustre*, and areas dominated by sharp-flowered and soft rush, with frequent devil=s-bit scabious *Succisa pratensis*, sneezewort *Achillea ptarmica*, whorled caraway and lesser scullcap.

The site includes some areas of dry acid grassland. Much of this is relatively species-poor, dominated by common bent *Agrostis capillaris* and sheep=s-fescue *Festuca ovina*, with tormentil and occasional heath bedstraw *Galium saxatile*. On one of the drumlins petty whin *Genista anglica* is locally frequent. Occasionally, the acid grassland becomes more heathy, with lousewort *Pedicularis sylvatica*, heather, field wood-rush *Luzula campestris* and bilberry. There are also areas where heavy grazing has encouraged the spread of species such as white clover *Trifolium repens*, mouse-ear *Cerastium fontanum* and annual meadowgrass *Poa annua* in the sward. In addition, there are some small areas in the north-western field of species-rich acid grassland with a high cover of herbs such as devil=s-bit scabious, saw-wort *Serratula tinctoria*, betony *Stachys officinalis*, common knapweed *Centaurea nigra*, and dyer=s greenweed *Genista tinctoria*.

A section of the Cledan, a small gravel-bedded stream runs through part of the site which supports Atlantic salmon *Salmo salar* also supports aquatic species such as intermediate water-starwort *Callitriche hamulata*, broad-leaved pondweed *Potamogeton natans* and the moss *Fontinalis squamosa*. In addition there are patches of rusty willow *Salix cinerea* ssp. *oleifolia* and alder *Alnus glutinosa* scrub which have developed around the northern periphery of the site. These habitats add to the ecological and structural diversity of the site.

This extensive wetland area supports a number of dragonflies including keeled skimmer *Orthetrum coerulescens*, golden-ringed dragonfly *Cordulegaster boltonii*, common darter *Sympetrum striolatum*, black darter *S.danae*, emerald damselfly *Lestes sponsa* and large red damselfly *Pyrrhosoma nymphula*. In addition there is a good range of breeding bird species, such as common snipe *Gallinago gallinago*, curlew *Numenius arquata*, grasshopper warbler *Locustella naevia* and reed bunting *Embreiza schoeniculus*. It is also used by hunting barn owl *Tyto alba*.

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