

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

**SITE OF SPECIAL SCIENTIFIC INTEREST CITATION**

**POWYS** **COLWYN BROOK MARSHES (NORTH & SOUTH)**

**Date of Notification:** 1980, 1988, 1989, 1991, 1997

**National Grid Reference:** SO 076557, SO 086540 & SO 090538

**O.S. Maps:** 1:50,000 Sheet number: 147  
1:10,000 Sheet number: SO 05 NE, SE

**Site Area:** 27.7 ha

**Description:**

The site comprises two wetland areas situated on level ground at the foot of the Carneddau Hills close to Hundred House. They support an unusually diverse mixture of swamp fen meadow and damp grassland plant communities and together comprise one of the largest areas of fen remaining in Powys. The Colwyn Brook flows through both areas and provides additional aquatic interest. The wetlands are an important refuge for otter *Lutra lutra* and support a range of scarce invertebrate species.

**Geology and Geomorphology**

The Carneddau Hills are composed of Ordovician rocks of the Llanvirn series, including shales, volcanic ashes, ashy shales, soda-rich lavas and calcareous dolerite. The lower ground comprises calcareous shales of Wenlock series (Silurian).

The marshes may originally have been small lakes that formed when glacial debris blocked the flow of water down the valley of the Colwyn Brook. Eventually these shallow lakelets were filled with silt and fen peat. The diversity of habitats and species in these areas has arisen because of the juxtaposition of base-rich drainage waters from the Carneddau and acidic influences from the accumulated peat.

**Flora**

The wettest parts of the site are located next to the Colwyn Brook and tributaries. Large areas are dominated by dense stands of lesser pond sedge *Carex acutiformis* but elsewhere the vegetation is more open and diverse. Here, species such as bottle sedge *Carex rostrata*, common marsh-bedstraw *Galium palustre*, marsh cinquefoil *Potentilla palustris*, bogbean *Menyanthes trifoliata*, water horsetail *Equisetum fluviatile* and sharp-flowered rush *Juncus acutiflorus* are frequent along with a wide range of associates, including lesser spearwort *Ranunculus flammula*, common sedge *Carex nigra*, marsh marigold *Caltha palustris*, white sedge *Carex curta*, greater bird's-foot-trefoil *Lotus uliginosus*, ragged-robin *Lychnis flos-cuculi* and marsh lousewort *Pedicularis palustris*. Bladder sedge *Carex vesicaria* is prominent locally and the wettest areas, next to the Colwyn Brook, support emergent species such as branched bur-reed *Sparganium*

*erectum*, fool's watercress *Apium nodiflorum* and water mint *Mentha aquatica*. There is also a small stand of common reed *Phragmites australis* swamp in the northern part of the site and a small area in the south is dominated by greater tussock-sedge *Carex paniculata*.

The swamp vegetation grades into fen meadow on the firmer ground. Here there are extensive areas dominated by tall purple moor-grass *Molinia caerulea* with several characteristic associates including tormentil *Potentilla erecta*, wild angelica *Angelica sylvestris*, marsh thistle *Cirsium palustre*, soft rush *Juncus effusus* and common marsh-bedstraw. Elsewhere the purple moor-grass is shorter and a wide range of other species are present including devil's-bit scabious *Succisa pratensis*, meadow thistle *Cirsium dissectum*, carnation sedge *Carex panicea*, sweet vernal-grass *Anthoxanthum odoratum*, flea sedge *Carex pulicaris*, red fescue *Festuca rubra*, quaking grass *Briza media*, red clover *Trifolium pratense*, sharp-flowered rush, heath spotted-orchid *Dactylorhiza maculata* subsp. *ericetorum*, lousewort *Pedicularis sylvatica*, saw-wort *Serratula tinctoria* and tawny sedge *Carex hostiana*. There are also areas dominated by sharp-flowered and soft rush with frequent common marsh-bedstraw, greater bird's-foot-trefoil, purple moor-grass and marsh pennywort *Hydrocotyle vulgaris*. Early marsh-orchid *Dactylorhiza incarnata* has been recorded from this community in the northern part of the site. Other fen meadow communities present include a small area dominated by yellow iris *Iris pseudacorus*, meadowsweet *Filipendula ulmaria* and rushes *Juncus* spp., and a small flush in the pasture on the southern part of the site characterised by abundant small sedges *Carex* spp. and brown mosses.

The driest pasture is dominated by fescues *Festuca* spp., crested dog's-tail *Cynosurus cristatus*, common bent *Agrostis capillaris* and sweet vernal-grass, with frequent devil's-bit scabious and a range of characteristic associates, including heath grass *Danthonia decumbens*, tormentil, dyers greenweed *Genista tinctoria* and pignut *Conopodium majus*. Greater butterfly-orchid *Platanthera chlorantha* has been recorded from the pasture on the northern part of the site.

Several areas of fen woodland are associated with the swamp communities. On the northern part of the site there is a large stand of alder *Alnus glutinosa* and downy birch *Betula pubescens* woodland with a ground flora dominated by purple moor-grass. Small stands of rusty willow *Salix cinerea* subsp. *oleifolia*, over soft rush and common marsh-bedstraw, occur throughout the site and a small patch of alder woodland is developing over greater tussock sedge in the southern area.

Within the northern part of the site the Colwyn Brook has a minimal gradient and flows slowly over a bed composed of fine silt. It's flora is characteristic of a small stream draining flat shales with a base poor influence from the adjoining peat. Typical aquatic and emergent plants here include fool's watercress, intermediate water-starwort *Callitriche hamulata*, floating sweet-grass *Glyceria fluitans*, water mint, hemlock water-dropwort *Oenanthe crocata*, lesser spearwort and mosses *Brachythecium rivulare* and *Fontinalis antipyretica*. The section flowing through the southern part of the site has a steeper gradient with a gravel bed. The channel is shaded by alder and rusty willow. Characteristic riparian plants here include fool's watercress, floating sweet grass, the mosses *Calliargon cuspidatum*, *Fontinalis antipyretica* and *Thamnobryum alopecurum* and the liverworts *Pellia epiphylla* and *Scapania undulata*.

### **Mammals and Birds**

The rich and varied mixture of carr woodland, scattered trees and open wetland makes this site an important refuge for otters and an excellent breeding and feeding area for a variety of bird species,

including waterfowl, waders, raptors and passerines.

### **Invertebrates**

A wide range of wetland invertebrates is present including the rare gnat *Anatella damfi*, the scarce grass wave moth *Perconia strigillaria* and several scarce bugs, beetles, flies and spiders.

### **Remarks:**

The site supports common otter *Lutra lutra*, a species listed in Annexes II & IV of EC Directive 92/43/EEC on the conservation of natural habitats and wild flora and fauna. Otter is also listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

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