

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

**SITE OF SPECIAL SCIENTIFIC INTEREST CITATION**

**RHONDDA CYNON TAFF**

**CWM CADLAN**

**Date of Notification:** 1972, 1982, 1995, 2000

**National Grid Reference:** SN 960096

**O.S. Maps:** 1:50,000 Sheet number: 160  
1:10,000 Sheet number: SN90NW, SN90NE, SN91SE

**Site Area:** 83.7 ha

**Description:**

Cwm Cadlan is of special interest for its marshy grassland, flush vegetation, unimproved neutral grassland and their association with other types of wet and dry pasture, woodland and scrub. Within the marshy grassland and flush vegetation, the fen-meadow and base-rich flush components are of particular importance, providing extensive areas of scarce vegetation types. The site is also of special interest for its large population of globeflower *Trollius europaeus*.

The site is situated in the valley of the Nant Cadlan approximately 1 km north-east of the village of Penderyn and 4 km north of Hirwaun, near Aberdare. It consists of a series of contiguous fields along the valley bottom at an altitude of 245-345 m. The underlying geology varies across the site, consisting mainly of Carboniferous sandstones and limestone, with Old Red Sandstone strata in the north-east. The soils are surface-water gleys which overly glacial boulder clays and alluvium.

Marshy grassland is widely distributed across the site. The main component of this habitat type is fen-meadow, which is characterised by the prominence of purple-moor grass *Molinia caerulea*, meadow thistle *Cirsium dissectum*, tawny sedge *Carex hostiana* and flea sedge *Carex pulicaris*. Associated species include sweet vernal-grass *Anthoxanthum odoratum*, quaking-grass *Briza media*, sharp-flowered rush *Juncus acutiflorus*, bog pimpernel *Anagallis tenella*, tormentil *Potentilla erecta* and devil's-bit scabious *Succisa pratensis*. The moss *Ctenidium molluscum* is often a prominent component of the sward. The fen-meadow often occurs in close association with base-rich flushes. Scattered throughout the site are small stands of rush-pasture, dominated by sharp-flowered rush or soft-rush *Juncus effusus*, and further types of purple moor-grass-dominated marshy grassland, supporting species such as sweet vernal-grass, tormentil *Potentilla erecta* and mat-grass *Nardus stricta*. In the north-east of the site some of the purple moor-grass vegetation is naturally less diverse, with occasional wavy hair-grass *Deschampsia flexuosa*, bilberry *Vaccinium myrtillus*, heather *Calluna vulgaris* and cross-leaved heath *Erica tetralix*.

Flushes are scattered throughout the site. Most of these are base-rich and are distinguished by the presence of species such as butterwort *Pinguicula vulgaris*, marsh arrowgrass *Triglochin palustris*, bogbean *Menyanthes trifoliata* and, more locally, long-stalked yellow sedge *Carex viridula ssp. brachyrrhyncha*, marsh helleborine *Epipactis palustris*, broad-leaved cottongrass *Eriophorum latifolium* and knotted pearlwort *Sagina nodosa*. In addition, there is usually a high

cover of small sedges, including tawny sedge, flea sedge, glaucous sedge *Carex flacca* and carnation sedge *Carex panicea*, and an often luxuriant bryophyte layer, with species such as *Aneura pinguis*, *Campylium stellatum*, *Calliergon cuspidatum*, *Cratoneuron commutatum*, *Drepanocladus revolvens* and *Fissidens adianthoides*. Acidic flushes are mainly confined to the north-east of the site where they are usually associated with wet heath and heathy forms of marshy grassland. These flushes generally consist of a high cover of rushes or purple-moor grass over a carpet of bog mosses *Sphagnum spp.*

Neutral grassland occurs in a few well-drained areas and is characterised by grasses such as red fescue *Festuca rubra*, common bent *Agrostis capillaris*, crested dog's-tail *Cynosurus cristatus* and sweet vernal-grass, with a variety of herbs including common bird's-foot trefoil *Lotus corniculatus*, common knapweed *Centaurea nigra*, greater burnet *Sanguisorba officinalis*, Lady's mantle *Alchemilla spp.* and red clover *Trifolium pratense*. Devil's-bit scabious *Succisa pratensis* and tormentil are present in most stands, with salad burnet *Sanguisorba minor* and Lady's bedstraw *Galium verum* very locally frequent.

Other vegetation types at the site include acidic grassland supporting heath bedstraw *Galium saxatile* and sheep's-fescue *Festuca ovina* and wet heath, with a high cover of ericaceous species and deer-grass *Trichophorum cespitosum*. Additional interest is provided by scattered small stands of woodland and scrub which contribute to the structural diversity present on the site.

A large population of globeflower occurs mainly in the stands of fen-meadow and unimproved neutral grassland. Globeflower was previously a widespread species of upland meadows but has undergone a serious post-war decline due to agricultural intensification.

Other uncommon species recorded from the site include marsh helleborine, broad-leaved cottongrass, fragrant orchid *Gymnadenia conopsea*, adder's-tongue *Ophioglossum vulgatum* and the liverworts *Riccia beyrichiana* and *Leiocolea bantriensis*. There is also a 1985 record for Southern damselfly *Coenagrion mercuriale*.

### **Remarks:**

The site lies within the Brecon Beacons National Park.

This site contains vegetation assignable to the *Molinia* meadows on chalk and clay (*Eu-Molinion*) (H6410) and Alkaline Fens (H7230) habitat types listed on Annex I of Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna. *C. mercuriale* is a species listed on Annex II of the Directive.

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