

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

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

DENBIGHSHIRE

LLWYN

<u>Date of Notification:</u>	1983, 2001
<u>National Grid Reference:</u>	SJ 083 643 and SJ 082 649
<u>OS Maps:</u>	1:50,000 Sheet number: 116 1:10,000 Sheet number: SJ 06 SE &NE
<u>Site Area:</u>	22 ha

Description:

Llwyn is of special interest for its alder woodland and associated swamp, mire and rush-pasture on a floodplain; the largest example within Clwyd.

The site is situated in the Vale of Clwyd on the floodplain of the Rivers Clywedog and Clwyd, 1km south east of Denbigh and below and to the north of the village of Llanrhaeadr. There are two blocks of woodland and associated wetland about the 30 m contour with an almost imperceptible slope eastwards towards the rivers. Drainage throughout is impeded with numerous springs arising within the site. Soils are predominantly of peat, some in excess of 1m depth, with patches of alluvium and river terraces, which reflects both the distribution of old river meanders and backwaters and the existing water courses. A disused railway embankment cuts across the north corner of the larger block of woodland.

The solid geology of the site is Lower Mottled Sandstone of the Permo-Triassic Period which is overlain by boulder clay, peat and river terrace deposits which trace its post glacial history. The peat is most probably of fen origin.

The woodland which forms the majority of the site is composed of a wide range of wet floodplain woodland communities all of which contain alder *Alnus glutinosa* as a major component on the canopy. The distribution of these communities is complex but in general follows the overlaid patterns of degree of wetness, soil type, nutrient status and age of individual stands of trees. For example, where young woodland is succeeding swamp, alder - greater tussock-sedge *Carex paniculata* woodland occurs although here, lesser pond sedge *Carex acutiformis* replaces greater tussock-sedge. Where nutrient status is high alder - common nettle *Urtica dioica* woodland is present, often following watercourses alongside a disused track and the railway embankment. The majority of the woodland is alder - ash *Fraxinus excelsior* - yellow pimpernel *Lysimachia nemorum* woodland which gives way to ash - field maple *Acer campestre* - dog's mercury *Mercurialis perennis* on the comparatively drier soils derived from alluvium and river terraces. In the northern block birch *Betula pendula* and *B. pubescens* becomes co-dominant in the canopy whereas crack willow *Salix fragilis* occupies a corner of the southern block. Throughout both blocks there are localised occurrences of sycamore *Acer pseudoplatanus* in the canopy.

There is a rich and often dense shrub layer in which bird cherry *Prunus padus* and guelder rose *Viburnum opulus* are conspicuous components amongst willows *Salix caprea* and *S. cinerea*, hazel

Corylus avellana, hawthorn *Crataegus monogyna*, wych elm *Ulmus glabra*, the occasional holly *Ilex aquifolium* and elder *Sambucus nigra* and patches of ash saplings. The uncommon shrubs alder buckthorn *Frangula alnus* and buckthorn *Rhamnus catharticus* are thinly scattered throughout.

The diversity of wet woodland communities present is reflected most clearly in the variations in the herb layer. In the alder - common nettle woodland this contains patches of common nettle with cleavers *Galium aparine*, bittersweet *Solanum dulcamara*, meadowsweet *Filipendula ulmaria*, herb robert *Geranium robertianum* and broad buckler-fern *Dryopteris dilatata* as the main components of this characteristically species-poor community. For the alder - ash - yellow pimpernel woodland the herb layer is more diverse as common nettle becomes rare, to be replaced with cleavers, meadowsweet and herb robert also occurring here with opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*, dog's mercury *Mercurialis perennis*, ivy *Hedera helix*, bramble *Rubus fruticosus* and a thin and patchy carpet of the common bryophytes, *Eurhynchium praelongum* and *Brachythecium rutabulum*. The wettest patches are picked out by yellow flag *Iris pseudacorus*, hemlock water-dropwort *Oenanthe crocata*, and water horsetail *Equisetum fluviatile*. Ash - field maple – dog's mercury woodland occupies the driest sections of the site at the south end where amongst carpets of dog's mercury, ivy and bramble, herb bennet *Geum urbanum*, enchanter's nightshade *Circaea lutetiana*, moschatel *Adoxa moschatellina*, remote sedge *Carex remota* and lords-and-ladies *Arum maculatum* join herb robert and broad buckler-fern in a rich vernal display of woodland herbs.

Within the woodland are open glades occupied by either fragments of common reed *Phragmites australis* - common nettle fen, lesser pond-sedge *Carex acutiformis* swamp and meadowsweet - wild angelica *Angelica sylvestris* mire, the latter also present at the woodland edges and adjacent pastures to north and south. This tall, lush herbaceous vegetation is in the first two dominated by the single species that gives the community name whereas the third supports a greater diversity that includes yellow flag and great hairy willowherb *Epilobium hirsutum*. With relaxation in grazing, young saplings of alders and willows are beginning to encroach upon the glades and spread out into the pastures.

Adjacent to the meadowsweet - wild angelica mire and where drainage remains impeded and with the peat very shallow, soft/sharp-flowered rush *Juncus effusus/acutiflorus* - common marsh-bedstraw *Galium palustre* rush pasture marks out where alluvium forms the soil. Here, with light grazing a rather rank sward is maintained and dominated by rushes, which include the more base-tolerant sharp rush *Juncus inflexus*, with abundant grasses such as yorkshire fog *Holcus lanatus* and creeping bent *Agrostis stolonifera*. Summer-flowering herbs present include a scattering of ragged robin *Lychnis flos-cuculi*, water mint *Mentha aquatica*, devil's-bit scabious *Succisa pratensis*, common bird's-foot-trefoil *Lotus corniculatus*, common fleabane *Pulicaria dysenterica* and buttercups *Ranunculus acris* and *R. repens*. Hidden in this sward the very occasional alder or willow seedling escapes the attentions of the grazing cattle. Where ground conditions permit the rush-pasture to be cut each year and grazing is therefore somewhat heavier, the consequence is that the herbs disappear and the species-poor yorkshire fog - soft rush rush-pasture occupies these parts of the adjacent fields.

The well-wooded and sheltered watercourses within the site afford lying-up sites for otter *Lutra lutra*.

Remarks:

3.7 ha are owned by Coed Cadw Woodland Trust as a woodland nature reserve.

Parts of the site are used for shelter by Otter, a Schedule 5 species in the Wildlife and Countryside Act 1981 (as amended) and an Annex II species of the Habitats and Species Directive.

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