

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

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

FLINTSHIRE

HERWARD SMITHY

Date of Notification: 2002

National Grid Reference: SJ 196740

OS Maps: 1:50,000 Sheet Number: 116
1:10,000 Sheet Number: SJ17SE

Site Area: 0.57 ha

Description

Herward Smithy is located 1km to the south east of Holywell, and lies at an altitude of 180m above mean sea level. The site is of special scientific interest for its open vegetation on soils rich in heavy metals.

The site lies on the edge of an elongated plateau formed of Lower Carboniferous Limestone which trends north-south, lying parallel and above the Dee Estuary to its east and with the Clwydian Hills to its west. The site contains metalliferous spoil arising from former mining for heavy metals, such as lead and zinc. Little of the soil material on site is therefore derived from the underlying bedrock. Skeletal calcareous ranker-type soils however have developed on the spoil.

Herward Smithy supports a key component of a cluster of localities in the Holywell-Rhosesmor area of North East Wales which has been identified as being of international importance for heavy metal tolerant *Festuca ovina*-*Minuartia verna* (sheep's fescue-spring sandwort) grassland. This grassland type is referred to as Calaminarian grassland and is associated with the spoil heaps of old lead/zinc mine workings and associated washing areas. The site is not grazed, other than by rabbits and provides an interesting comparison with grazed Calaminarian grassland found nearby on the nearby Halkyn Common.

The vegetation is characteristically open and typically includes heavy metal tolerant species such as sheep's fescue *Festuca ovina*, common sorrel *Rumex acetosa* and the nationally scarce spring sandwort *Minuartia verna* together with a range of lower plants (lichens and bryophytes). The lichen communities dominated by *Peltigera*, which include *Peltigera rufescens*, *P. neckeri* and *P. membranacea* are notable. Carpets of *Cladonia* species, which include *Cladonia rangiformis* and *C. furcata*, occur in more sheltered areas. Two nationally scarce lichens, *Vezdaea leprosa* and *Sarcosagium campestre* are present. Among the bryophytes, *Bryum* species are dominant in places with the nationally scarce, *Bryum pallescens*, characteristic. This assemblage of species shows stronger affinities with mining areas in northern England with similar geology, such as Derbyshire and the northern Pennines, than with other Welsh metalliferous mine sites in mid and north Wales.

The site also contains areas of neutral grassland and scrub often in an intimate mosaic. The neutral grassland supports species such as common spotted orchid *Dactylorhiza fuchsii*, rough hawkbit *Leontodon hispidus*, bird's foot trefoil *Lotus corniculatus*, yarrow *Achillea millefolium*, fairy flax *Linum catharticum*, eyebright *Euphrasia officinalis* agg. and ribwort plantain *Plantago lanceolata*.

Remarks.

Calaminarian grassland is listed on Annex 1 of the EC Habitats Directive (Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora).

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