

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

SITE OF SPECIAL SCIENTIFIC INTEREST: CITATION

MWYNGLODDFA NANTYMWYN

CARMARTHENSHIRE

Date of notification: 14 March 2014

Local Planning Authority: Carmarthenshire Council

National Grid Reference: SN 7820 4466, 7871 4468 & 7907 4446

OS Maps: 1:50,000 Sheet number: 146
1:10,000 Sheet number: SN 74SE

Site area: 21.96 ha

Description

Mwyngloddfa Nantymwyn is the largest of the old base-metal mines in the southern part of the Welsh Caledonides. Located approximately 1km north of Rhandirmwyn, it occupies north-west facing slopes above Nant-y-Bai. It is important both for its mineralization, and for the metallophyte mosses and liverworts (bryophytes), and lichens that this mineralization has encouraged to grow there.

Geology

The site is of considerable importance because it offers an excellent opportunity to compare the mineralization in this, the southern outlier of the Central Wales Orefield, with the main part of the orefield some distance to the north. In between are scattered, mainly small mines and trials, but only at Nantymwyn does the mineralization again appear on a large scale. The mineralization is paragenetically similar to that seen in the main part of the orefield, and is interpreted as a representative of the same regional phase of mineralization. The site contains a spectacular lode exposure, which forms a large rampart along the top of Pen Cerrig-mwyn. The selected areas of spoil tips are rich in quartz-sulphide mineralization which has a multiphase paragenesis with elements resembling the early and late (A1 and A2) phases of metallogenesis in the Central Wales Orefield. As in Central Wales, the transition from early fine-grained polyminerale breccia cements to late simple mineralogies in coarse-grained crustiform deposits is notable. The site is also of interest for the huge growth-zoned quartz crystals developed during the later phases of mineralization.

Biology

Metallophytes are plants which are able to grow in habitats that are rich in metal ions, and some specialist metallophytes are found in areas that are otherwise too metal-toxic for other plants to grow. At Mwyngloddfa Nantymwyn, the most metal-rich areas have characteristically sparse vegetation, with little growing except for lichens and bryophytes, and often with a frost-heaved appearance because of the lack of plant roots to help bind the soil. Two Nationally Rare

metallophyte mosses grow here: *Ditrichum plumbicola* lead-moss and *Scopelophila cataractae* tongue-leaved copper-moss. The *Ditrichum* is notably abundant, covering several square metres in one complex of ‘slime pits’, and is widely distributed across the site. *Scopelophila* is also found in these highly metal-toxic ‘slime pits’ and is otherwise known in Wales from just three sites.

Abundant mine spoil of varying sizes supports a diverse range of lichens and lichenicolous fungi (fungi that parasitise lichens). These include at least 32 species that are either restricted to metal-rich substrates (obligate metallophytes) or grow most often on metal-rich substrates (facultative metallophytes). Especially prominent are extensive greyish-white patches of the coral-like *Stereocaulon condensatum*, *Stereocaulon dactylophyllum* and *Stereocaulon glareosum*, as well as the smaller, rock-dwelling *Stereocaulon nanodes* and *Stereocaulon pileatum*, and the rusty-red *Rhizocarpon oederi*. Smaller species include the obligate metallophyte *Gyalidea subscutellaris*, the largest known population of the Welsh endemic *Gyalideopsis crenulata*, and at least three members of the genus *Vezdaea*.

Associated with the metal-mine workings are areas of heathland and *Molinia caerulea* purple moor-grass vegetation. *Calluna vulgaris* heather has colonised some mine spoil that is less metal-rich, whilst damp, rocky ground near small streams holds the metallophyte *Silene uniflora* sea campion. Some small water bodies are host to a fairly rich aquatic flora and support some of the diverse invertebrate species found across the site.

Remarks

Mwyngloddfa Nantymwyn has been selected following the completion of a joint research initiative undertaken on behalf of CCW by the National Museums and Galleries of Wales. The site is a revision to the former Nature Conservancy Council’s Geological Conservation Review (GCR), a national survey and evaluation of sites of geological and geomorphological interest, and is described in the GCR volume entitled ‘Mineralization in Great Britain’ (Bevins *et al.*, 2010).

Selection of the biological features follows the ‘Guidelines for selection of biological SSSIs: non-vascular plants’ (Hodgetts, 1992).

This document is NOT a definitive legal version and has been formatted for use on the CCW Web site. This document should not be used in any legal proceedings, public enquiry or any other hearing or appeal. If you require a full legal copy of the document please contact CCW in writing.