

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

SITE OF SPECIAL SCIENTIFIC INTEREST: CITATION

MERTHYR TYDFIL

CWM GLO A GLYNDYRYS

Local Planning Authority:

Merthyr Tydfil County Borough Council

Date of Notification:

17 July 2008

National Grid Reference:

SO 040052

OS Maps:

1:50,000 Sheet number: 160

1:10,000 Sheet number: SO 00 SW; SO 00 NW

Site Area:

203.1ha

Description:

Cwm Glo a Glyndyrys is of special interest for its extensive areas of marshy grassland, species-rich neutral grassland and acid grassland, and for the association of these habitats with others including woodland and heath. It is also of special interest for its outstandingly diverse assemblage of grassland fungi, including 32 species of waxcap *Hygrocybe* spp, making it one of the best sites in Britain.

This large site is situated on the northeast and east facing slopes to the West of Merthyr Tydfil, at an altitude of between 200m and 370m, overlying Carboniferous mudstones and siltstones of the Middle Coal Measures. The site comprises a series of small enclosures surrounded by woodland, extensive areas of open land with scattered mature trees, scrub and woodland. A key part of the site is the series of remnant colliery spoil tips that are between one hundred and two hundred years old. These have been colonised by a variety of semi-natural habitats, providing a unique opportunity to study the colonisation of abandoned coal and iron workings from one of the earliest periods of the industrial revolution in the world.

In the north east of the site there are a series of small enclosures, sheltered by mixed woodland. Drainage is mainly impeded across this area, which supports base-rich fen-meadow communities characterised by meadow thistle *Cirsium dissectum*, devil's bit scabious *Succisa pratensis* and a number of sedge species, including glaucous sedge *Carex flacca*, carnation sedge *C. panicea*, common sedge *C. nigra*, tawny sedge *C. hostiana*, common yellow sedge *C. viridula* ssp *opdocarpa* and flea sedge *C. pulicaris*.

In places this fen-meadow community grades into drier species-rich neutral grassland. Typical species here include bird's-foot-trefoil *Lotus corniculatus*, black knapweed *Centaurea nigra* and a range of grasses including common bent *Agrostis capillaris* and sweet vernal-grass *Anthoxanthum odoratum*. A slight acid nature to the soil is suggested by the presence of heath-grass *Danthonia decumbens* and tormentil *Potentilla erecta*, whilst, in places flushing is indicated by quaking-grass *Briza media* and great burnet *Sanguisorba officinalis*.

Elsewhere on the site, the landscape is more open, with pastures separated by steep, wooded streams and the remnants of former field boundaries. The fen-meadow community is present here also, but has a conspicuous ericoid element with cross-leaved heath *Erica tetralix* and heather *Calluna vulgaris*. Other wet pasture communities also occur in this area, dominated by purple moor-grass *Molinia caerulea*, sweet vernal grass, sheep's fescue *Festuca ovina* and mat-grass *Nardus stricta*, with lousewort *Pedicularis sylvatica*, tormentil and heath wood-rush *Luzula multiflora*.

In the drier areas, and on the ancient spoil heaps, two types of grassland have developed. Species-rich neutral grassland occurs where the soils are not too acidic. Typical grass species here include common bent, crested dog's tail *Cynosurus cristatus* and red fescue *Festuca rubra*. Bird's foot trefoil, black knapweed, autumn hawkbit *Leontodon autumnalis*, common cat's ear *Hypochaeris radicata*, eyebright *Euphrasia* sp., and, locally, wild thyme *Thymus praecox*, are all present, together with spring sedge *Carex caryophylla*, glaucous sedge and pill sedge *C. pilulifera*.

In places, this neutral grassland grades into vegetation more associated with dry, acid conditions. The main grass species are common bent and sheep's fescue, together with heath bedstraw *Galium saxatile*. A variety of other herbs can be found in different areas of acid grassland across Cwm Glo a Glyndyrys. These range from daisy *Bellis perennis* and common mouse-ear *Cerastium fontanum* where soils are only slightly acid, to heather and bilberry *Vaccinium myrtillus* where the grassland assumes a more 'heathy' character. Although acid grassland is generally a habitat of the uplands and upland fringe, in places at Cwm Glo a Glyndyrys it can have a marked 'lowland' character. These areas can be particularly species-rich, with plants such as bird's foot trefoil, betony *Stachys betonica* and devil's bit scabious.

The significant grassland fungal community has developed on the drier, more freely drained areas of the site, predominantly occurring in association with species rich neutral grassland and dry acid grassland habitats on site. The tips present throughout the site support much of the fungi interest. Species of note include three of the four grassland species listed on the UK Biodiversity Action Plan list – the big blue pinkgill *Entoloma bloxamii*, the olive earthtongue *Microglossum olivaceum* and the dark-purple earthtongue *Geoglossum atropurpureum*. Other species of note include smoky spindles *Clavaria fumosa* and the diverse assemblage of waxcap *Hygrocybe* spp. fungi. Some 32 species of waxcaps have been identified at Cwm Glo a Glyndyrys, including the pink waxcap *Hygrocybe calyptriformis* and such uncommon species in Wales as *H. ingrata* and the nitrous waxcap *H. nitrata*, making the area one of the best sites for these attractive fungi in western Europe.

Cwm Glo a Glyndyrys has a number of other habitats that add to the interest of the site. There are extensive areas of woodland, some of which is known to have been present at the site since at least 1800. This woodland is mostly oak *Quercus robur* and birch *Betula pendula* with occasional beech *Fagus sylvatica* and rowan *Sorbus aucuparia*, together with alder *Alnus glutinosa* and willows *Salix* spp in the wetter areas. The ground flora includes several ancient woodland indicator species, such as bluebell *Hyacinthoides non-scripta* and wood sorrel *Oxalis acetosella*. Patches of heath can be found across the site where soils are acid. Characteristic species include heather, bilberry and a rich carpet of *Cladonia* lichens where soils are dry, and cross-leaved heath and deer-grass *Scirpus cespitosus* in damper

areas. Small areas of flushes and springs are dominated by *Sphagnum* mosses or sedges such as flea sedge and tawny sedge. Other habitats include small ponds and small areas of swamp. The grasslands and woodlands at Cwm Glo a Glyndyrys provide habitat for a range of scarce and local species. Several relatively uncommon plant species are present, including whorled caraway *Carum verticillatum*, petty whin *Genista anglica*, bladder sedge *C. vesicaria*, soft-leaved sedge *C. montana*, hairy lady's-mantle *Alchemilla filicaulis*, intermediate lady's-mantle *A. xanthochlora*, narrow buckler-fern *Dryopteris carthusiana* and adder's tongue *Ophioglossum vulgatum*. The marsh fritillary butterfly *Eurodryas aurinia* has been noted in the marshy grassland areas, where its food plant, devil's bit scabious occurs. A nationally scarce moth, the cloaked carpet *Euphyia biangulata*, has been recorded in the southern part of the site. A number of bird species are found at Cwm Glo a Glyndyrys and, including nightjar *Caprimulgus europaeus*, cuckoo *Cuculus canorus*, tree pipit *Anthus trivialis*, whinchat *Saxicola rubetra*, wood warbler *Phylloscopus sibilatrix* and redstart *Phoenicurus phoenicurus*. Great crested newts *Triturus cristatus* have been recorded in ponds on the site.


Remarks:

Cwm Glo a Glyndyrys SSSI lies within the Merthyr Tydfil Landscape of Outstanding Historic Interest, identified on the CCW/Cadw/ICOMOS Register of Landscapes of Outstanding Historic Interest in Wales and noted for its evidence of industrial activity that dates back to about 1750. The Cyfartha Canal Level (GM467) Scheduled Ancient Monument is within the boundary of the site.

Cwm Glo SSSI was originally notified in 2003. Cwm Glo a Glyndyrys SSSI includes this original site together with a significant extension to the South East and West.

CWM GLO A GLYNDYRYS

Merthyr Tudful / Merthyr Tydfil

	Safle o Ddiddordeb Gwyddonol Arbennig Site of Special Scientific Interest
1:10000	Graddfa Scale
203.1 ha	Arwynebedd Area
23/1/03	Hysbyswyd am y tro cyntaf First notified
17/07/08	Hysbysiad o ehangiad Notification of enlargement
	Cadamhad Confirmation
1597	Rhif y safle Site id

Caeoglwyd y data ar raddfa a 1:2500, a'i argraffu ar raddfa o 1:10,000. Fe gewch fapiau mwy manwl os gwnech gais amdant.
Data captured at 1:2500 scale and printed at 1:10000.
More detailed maps are available on request.



CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

SITE OF SPECIAL SCIENTIFIC INTEREST: OPERATIONS REQUIRING
CONSULTATION WITH THE COUNTRYSIDE COUNCIL FOR WALES (CCW)

SITE NAME: CWM GLO A GLYNDYRYS

UNITARY AUTHORITY: MERTHYR TYDFIL

DATE OF NOTIFICATION: 17 JULY 2008

The operations listed below may damage the features of interest of Cwm Glo a Glyndyrys SSSI. Before any of these operations are undertaken you must consult CCW, and may require our consent. **The list of operations is not a prohibited list.**

It is usually possible to carry out some of these operations in certain ways, or at specific times of year, or on certain parts of the SSSI, without damaging the features of interest. If you wish to carry out any of these activities please contact the local office of CCW, a Conservation Officer will give you advice and where appropriate issue a consent. Please help us by using the enclosed form to ask us for consent to carry out these operations.

In certain circumstances it will not be possible to consent these operations, because they would damage the features of interest. Where possible the Conservation Officer will suggest alternative ways in which you may proceed, which would enable a consent to be issued. To proceed without CCW's consent may constitute an offence. **If consent is refused, or conditions attached to it, which are not acceptable to you, you will be provided with details of how you may appeal to the National Assembly of Wales.**

Ref No Type of operation

1. Cultivation, including ploughing, rotovating, harrowing and re-seeding.
2. Grazing
3. Stock feeding
4. Mowing or cutting vegetation
5. Application of manure, slurry, silage liquor, fertilisers and lime.
6. Application of pesticides terrestrial and aquatic herbicides (weedkillers).
7. Dumping, spreading or discharging of any materials.
8. Burning.
9. Release into the site of any wild, feral, captive-bred or domestic animal, plant, seed or micro-organism and any genetically modified organism.
11. Destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf or peat.
12. Woodland management including planting, felling, pruning and tree surgery, thinning, coppicing, changes in species composition and removal of fallen timber.

- 13a. Drainage including moor-gripping, the use of mole, tile, tunnel or other artificial drains.
- 13b. Modification to the structure of water courses including rivers, streams, springs, ditches, dykes, drains, including their banks and beds, as by re-alignment, regrading, damming or dredging.
- 14. Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage regime, (eg through the installation of new pumps).
- 15. Infilling or digging of ditches, dykes, drains, ponds, pools, marshes, quarries or pits.
- 20. Extraction of minerals including peat, shingle, hard rock, sand and gravel, topsoil, subsoil, chalk, lime, limestone pavement, shells and spoil.
- 21. Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures.
- 22. Storage of materials.
- 23. Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.
- 26. Use of vehicles, or craft likely to damage the qualifying features.
- 27. Recreational activities likely to damage the qualifying features.

Notes:

- i. This is a list of operations appearing to CCW to be likely to damage the special features of this SSSI, as required under section 28(4)(b) of the Wildlife and Countryside Act 1981 as substituted by Schedule 9 to the Countryside and Rights of Way Act 2000.
- ii. Where an operation has been granted a consent, licence or permission from another authority separate consent will not normally be required from CCW, however you should always give notice to CCW prior to exercising such consent, licence or permission.
- iii. Any reference to animal in this list shall be taken to include any mammal, reptile, amphibian, bird, fish or invertebrate (including honey bees).

CWM GLO A GLYNDYRYS SITE OF SPECIAL SCIENTIFIC INTEREST

Waxcap fungi at Cwm Glo a Glyndyrys © Scott Hand, CCW

YOUR SPECIAL SITE AND ITS FUTURE

'Your Special Site and its Future' is part of our commitment to improve the way we work with Site of Special Scientific Interest (SSSI) owners and occupiers. In it, we explain what is special about the wildlife on your site, and what care is needed to look after it into the future.

All SSSIs are considered to be of national importance and we recognise the crucial role that owners and occupiers play in their management and protection. We need you to share your views and knowledge of this site with us, to help safeguard it.

We hope that you will find 'Your Special Site and its Future' interesting and helpful. Please contact us if there is anything about the site and its management that you would like to discuss.



Cwm Glo a Glyndyrys SSSI from the opposite side of the Valley © Scott Hand, CCW

What is 'special' about the wildlife at Cwm Glo a Glyndyrys SSSI?

Cwm Glo a Glyndyrys SSSI has four special features.

Species-rich neutral grassland is now very rare. In the past, much of the grassland in Britain on free draining soils would have been like this. However, between the 1930s and 1980s, it has been estimated that 97% of this habitat was lost, mainly to intensive agricultural improvement. Cwm Glo a Glyndyrys SSSI is one of the largest remaining fragments in the Mid Glamorgan area.

Species rich neutral grassland is very rich in plant life, and can support as many as 30 species of plant per square metre. These in turn provide food for large numbers of insects, birds and mammals. By comparison, modern agricultural grassland may have as few as one or two species of plant and supports few insects and birds.

Marshy grassland is also of particular interest on this site. This is a very rare habitat, found on more waterlogged ground. Much of the remaining lowland marshy grassland in Britain is found in Wales and we have a special responsibility for its conservation. Like species rich neutral grassland, most has been lost in the 20th century. It is rich in plant species, and is particularly important for a number of rare butterflies, such as the marsh fritillary. Cwm Glo a Glyndyrys SSSI is one of the largest remaining examples of lowland marshy grassland in the Mid Glamorgan area.

Lowland acid grassland is also a rare habitat in Wales, found where the pH of the soil is between 4 and 5. Like species-rich neutral grassland, much of this habitat has been lost to agricultural intensification, and in some areas, afforestation. Acid grasslands tends to be managed as pasture. At Cwm Glo a Glyndyrys this habitat has developed on former mining spoil heaps.



Unimproved grassland at Cwm Glo a Glyndyrys SSSI © Scott Hand, CCW

Finally, Cwm Glo a Glyndyrys is also important for its assemblage of **grassland fungi**. The mushrooms and toadstools that can be seen on the site, particularly in the autumn, are the fruiting body of the fungi, most of which is hidden below ground. These species rely on grassland that has been not been disturbed by ploughing or subject to applications of fertiliser or other agro-chemicals.

As these habitats have become increasingly scarce in modern Wales, the fungi that rely on them have become increasingly rare. Nearly 40 species of fungus have been recorded at Cwm Glo a Glyndyrys making it one of the best sites in Britain.

Cwm Glo a Glyndyrys is a large area of semi-natural habitat, and as a result there are a number of other habitats and species present on site that add to the overall wildlife interest of the SSSI. Additional habitats include a substantial area of woodland, some of which has been shown to date back to at least 1800 and probably has links back to woodland present in the area in pre-industrial times. Wet heath and dry heath are also present, together with smaller areas of swamp and small ponds. Amongst the wide range of species recorded on site are a number of breeding birds, rare plants and over 100 species of moth. More species would undoubtedly be found if the area was subject to prolonged, systematic survey.



Waxcap fungi at Cwm Glo a Glyndyrys SSSI © Scott Hand, CCW

What do we want Cwm Glo a Glyndyrys SSSI to look like?

The following is a description of how we would like to see Cwm Glo a Glyndyrys SSSI:

A visit to Cwm Glo a Glyndyrys SSSI during the summer months reveals the wide range of habitats that can be found across the site. Different grassland types are mixed with areas of heathland and woodland, which create an attractive mosaic of habitats rich in wildlife. These habitats exist not only on undisturbed land, but have also developed on the numerous mine spoil heaps that are scattered across the hillside.

The species-rich neutral grassland is an attractive mix of herbs such as black knapweed, bird's foot trefoil, autumn hawkbit, cat's ear and red clover, together with grasses such as crested dog's-tail, red fescue and common bent. Where the soils become slightly acidic, species such as tormentil, devil's bit scabious and heath grass can also be seen.

From a distance, the marshy grassland can look a slightly 'brownier' green than any agriculturally improved fields in the surrounding area.

This grassland can range from a mix of grasses and sedges such as purple moor-grass and glaucous sedge, dotted with flowers such as devil's bit scabious and meadow thistle. In places, rushes such as soft rush and sharp-flowered rush predominate, with herbs such as greater bird's-foot trefoil, ragged-robin and water mint. In places the marshy grassland has quite a 'heathy' character, with heather and cross-leaved heath both present, together with lousewort and a range of sedges.

Where the soils is still acid, but drier, lowland acid grassland can be found. The main grasses here are sheep's fescue, mat-grass and common bent, with a range of herbs. Some areas of acid grassland can have relatively few herb species, such as heath bedstraw, but in places these can be joined by heather, and bilberry. Very locally, the acid grassland can be quite species rich, with betony, devil's bit scabious and bird's-foot trefoil all present. On the sides of spoil heaps, the acid grassland can be very freely draining. Here, species capable of withstanding long periods of drought, such as mouse-ear hawkweed and sheep's sorrel, are found.

All the grasslands range from around 5cm in height up to about 30cm, and are usually easy to walk through. Species that might indicate agricultural improvement or the application of fertilisers, such as rye grass, docks or nettles are comparatively rare. Bracken is present on parts of the site, but its range is not increasing.

In autumn, the grasslands are studded with a wide range of mushrooms, toadstools and other fungi. Particularly noticeable are the colourful waxcap species, so named because their waxy appearance.

What management is needed on Cwm Glo a Glyndyrys SSSI, and why?

Although Cwm Glo a Glyndyrys is an excellent place for wildlife, it is not 'natural'. In fact it is the product of decades, or even centuries of management, which includes both agricultural use and the legacy of coal mining and other industries around the Merthyr Tydfil area. It will be essential to maintain this agricultural management in order to protect the special features at Cwm Glo a Glyndyrys.

What does this mean in practice?

There is some management that is essential to conserve the special features. Other management actions could damage the features within a very short time. These are the ones we regard as the most important

Grazing is very important. It allows lots of different plants to grow together, and prevents one or two species of plant from taking over the grassland, or even the grassland turning into scrub and woodland. Light grazing, preferably by cattle alone, or by a combination of horses and cattle, is the best to maintain both types of grassland. If possible, grazing should mostly be limited to between about May and September.

The aim of the grazing will be to produce a sward that is about 5 – 20cm (2 – 10 inches) high at the end of the summer.

The use of **modern fertilisers and other chemicals** at Cwm Glo a Glyndyrys can be very harmful to the species rich and marshy grasslands. This is because they stimulate the growth of one or two grass species at the expense of the many different plants we are trying to encourage. The grassland fungi also rely on ground that has been managed in a 'traditional' manner, with few inputs of fertiliser. Once these fertilisers have been used on land, it is very hard to get rid of them, and it may not be possible to restore the grasslands for years, if ever.

Any areas of supplementary feeding for livestock should be sited away from areas of species-rich, acid or marshy grassland as these too can lead to enrichment of the soil.

Marshy grassland and areas of flush and spring rely on a high water level to maintain the mosses and other species that are dependant on it. **No new drains should be dug** on this habitat, as this could result in the grassland drying out, losing its typical wet grassland species in the process.

Most of the grassland fungi are actually present in the soil, with only the fruiting bodies, which we recognize at mushrooms or toadstools, being seen above ground. **Ploughing or other disturbance of the soil** could seriously damage the fungi, by breaking the tiny filaments, or 'hyphae', through which the fungi draw nutrients from the soil.

Finally

Our knowledge of wildlife is constantly improving. It is possible that new issues may arise in the future, whilst other issues may disappear. This statement is written with the best information we have now, but may have to change in the future as our understanding improves. Any information you can provide on the wildlife of your site and its conservation would be much appreciated.

If you would like to discuss any aspect of your SSSI, or have any concerns about your SSSI, please contact your local CCW office.

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