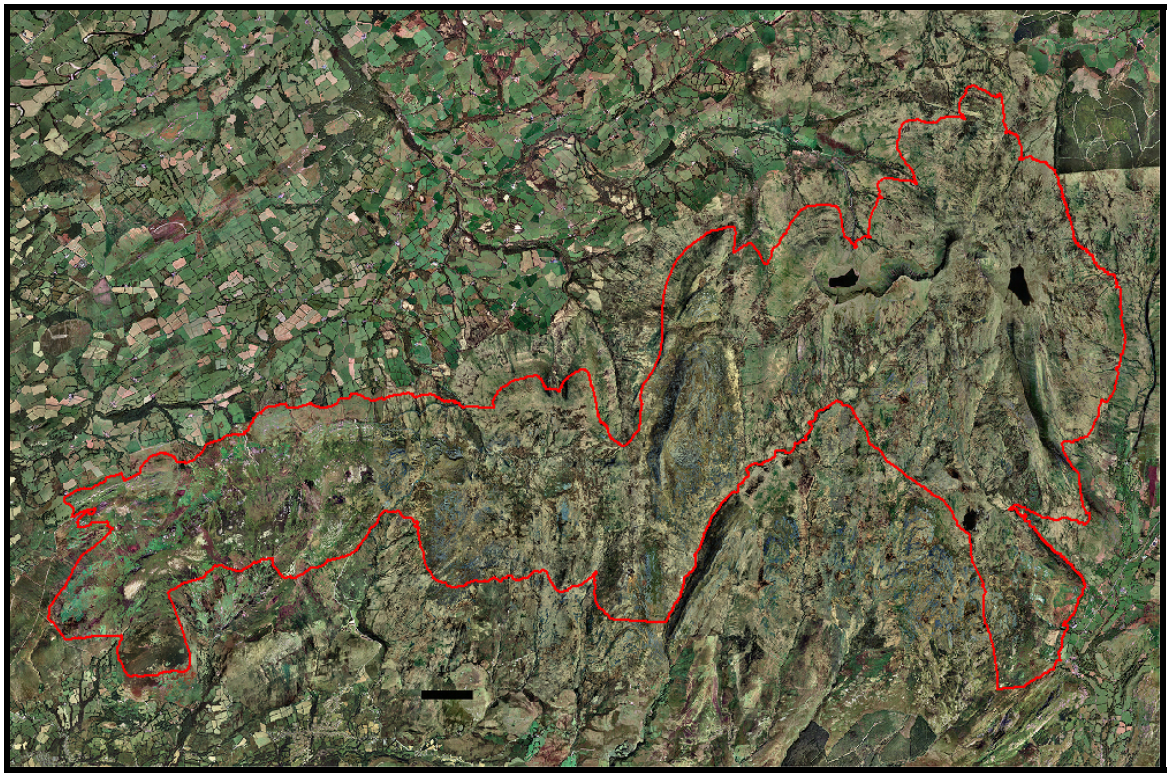
# MYNYDD DU (BLACK MOUNTAIN) SITE OF SPECIAL SCIENTIFIC INTEREST





# 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 and geology on your site, and what care is needed to look after its wildlife and geology 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.

**What is 'special' about the wildlife and geology at Mynydd Du SSSI?**

There are several special features present at this site including plant communities of cliffs, limestone and scree, limestone grassland, wet flushes, dry heathland, mountain lakes, rare plants, lichens, fungi and geological and landform features:

The cliff vegetation includes types rich in mosses and ferns, found on acidic and more calcareous rocks, as well as tall vegetation on ledges. There are small areas of limestone pavement and other limestone outcrops, with herb-rich grassland, some of which has developed on old areas of spoil and lime-rich springs and flushes. The more acidic gritstone outcrops and hillsides in the western and south-eastern arms of the site support extensive areas of heathland dominated by heather and bilberry.

Llyn y Fan Fawr and Llyn y Fan Fach contain plants that are typical of naturally nutrient poor lakes with stony beds, including the locally rare quillwort. Rare plants on the cliffs and limestone outcrops include northern bedstraw, dwarf willow, roseroot and a range of hawkweeds that have a very restricted geographical distribution, including some that are found only on cliffs in the Brecon Beacons National Park. The cliffs are also notable for the range of upland mosses and liverworts, including many species more typically found in northern Britain.

The site includes cave systems at Dan-yr-ogof and Tunnel Cave (Cathedral Cave), which display a wide variety of structural and morphological features, including impressive calcite deposits, that demonstrate the complete sequence of cave development in the area. Important glacial landform features, such as cirques and moraines, are displayed on the northern and eastern escarpment and around Llyn y Fan Fach. There are also important post-glacial features such as screes and active erosion and depositional channel processes.

As well as the features listed above, Mynydd Du has other habitats and species that contribute to the special wildlife interest. These include upland acidic grassland, wet heath, blanket bog, rock outcrops and screes, limestone and sandstone quarries, acidic flushes, mountain streams and bracken. The mixture of habitats is important for much of the wildlife, including uncommon birds such as ring ouzel and, except where it is specified below, management of this site should aim to look after these habitats and species as well as those listed above.

Llyn y Fan Fach ©GS Motley

**What do we want Mynydd Du SSSI to look like?**

The following is a description of how we would like to see the features at this site:

*For each habitat of particular interest, the area is stable in the long term, its quality and range of typical species are maintained and the factors that may affect the habitat are under control.*

*For each species of particular interest, the population is stable or increasing and is sustainable in the long term and the factors which affect the species or its habitat are under control.*

*The special underground features at Dan-yr-ogof and Tunnel Cave (Cathedral Cave) are accessible to allow study of the cave systems and their many structures of interest, with both scientific and public/recreational use and cave exploration carefully managed to safeguard the important sediments and cave features, and to prevent harmful disturbance of cave life. The glacial landforms and post-glacial process features are also available for continuing study.*

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**What management is needed on Mynydd Du SSSI and why?**

Although the Mynydd Du is an excellent place for wildlife, geology and landforms it will only remain so if the necessary management continues. CCW's priority is to work with you to ensure that this management is carried out.

**What does this mean in practice?**

There are a number of different factors that could damage the special features at Mynydd Du if they are not properly managed. These are the ones we regard as most important:

- **Grazing**

  Grazing is necessary in order to maintain a short sward in the more interesting grassland areas and to prevent heathland, bog and grassland from becoming scrubbed over. However, many of the interesting plants on the cliffs are intolerant of grazing and are confined to areas

less accessible to stock. Reduced grazing levels on the main escarpment would allow these plants to spread out from their craggy refuges.

Heavy grazing can also damage heather, suppress bilberry growth and prevent regeneration of heathy plants, eventually leading to the establishment of a grass-dominated sward. Grazing in autumn and winter, particularly by sheep, is particularly damaging to the heathy vegetation and should be avoided. Even the more productive grassland areas may be damaged by continual heavy stocking, leading to poaching and nutrient enrichment through the accumulation of dung.

A balance needs to be struck between maintaining sufficient grazing in the grassland and moorland areas while still allowing the more sensitive plants to thrive. This balance can be difficult to attain on large expanses of common land, but shepherding of stock may help.

A suitable mixed grazing regime should be established/maintained across the more accessible parts of the site. Cattle are good at controlling bracken and both ponies and cattle do less damage to older heather, although heavy cattle grazing can damage regenerating heather. Ponies are particularly useful for low intensity year-round grazing. Sheep tend to avoid the wettest areas and will graze the drier heath and limestone grassland preferentially and can cause localised damage in these areas. However, they are better able to graze on the steeper slopes, and maintain some of the habitats there.

- **Scrub and bracken encroachment and invasive non-native species**

Trees, hawthorn and other scrub are a valued feature of the hill edges and should be seen as a benefit to wildlife rather than a problem. Ideally, scrub and woodland will spread into poor habitats such as dense bracken. However, any spread should be monitored and action may be taken in future to prevent heathland, or more valuable grazing areas and habitats turning into scrub woodland.

Scrub invasion in the open moorland areas can be controlled by grazing. However, bracken can be more of a problem. Grazing may not prevent bracken invasion particularly if sheep rather than heavier animals are the main stock-type and burning can encourage the spread of bracken. Bracken control should be considered in areas where there has been significant spread within the drier heathy areas. Aerial spraying would be unsuitable over much of the site due to the presence of habitats supporting sensitive species such as the rarer ferns which would also be affected by the spray, therefore other methods would have to be considered in certain areas.

In some parts of Wales invasive non-native plants can be problem and can dominate large areas, pushing out the native fauna and flora. Limestone areas, particularly cliffs and old quarries are particularly affected by cotoneaster, which can cloak extensive areas of the cliff face preventing native plants from growing. Rhododendron can also be a problem on more acidic soils. Invasive species need monitoring and measures taken to control them if necessary.

- **Access & Recreational Use**

Access to the cave systems in order to study the underground formations, geology and the surface features should be available. Some caves are also used by sporting cavers. This is generally allowed at the discretion of the landowners, although some of the associated surface features are located on designated access land.

Large parts of the Dan-yr-ogof system are accessible to the general public as a show cave and for educational purposes and a management committee is in place to safeguard the cave features. Caves on Mynydd Du, some of which are found high up on the open moorland, are also important for hibernating bats and it is also vital that those who enter the caves do so in a way that avoids detriment to the bat populations. Once disturbed, hibernating bats tend to wake up and fly around, using up precious fat reserves, which may be difficult to replace due to the lack of insect food in the cold winter months. Cavers and geologists should avoid areas or avoid lingering in areas where bats are likely to be disturbed, particularly during the winter months. Any structures placed at cave or roost entrances to prevent unauthorized access should not hinder the passage of bats.

Cave management should involve and build on existing measures which are principally voluntary mechanisms implemented by owners and cavers, such as taping-off sensitive cave formations, marking through routes, use of agreed codes of practice. If necessary, to achieve a sufficient level of control, cave entrances may be fitted with a gate with an appropriate access regime established. Although cave exploration should not be discouraged it needs to be carefully controlled.

The open hill land within the site is subject to a right of public access on foot. Such use is very intensive in places and some serious erosion has occurred where major paths go across bogs, steep slopes or cliff areas with thin soils. This problem can be partially addressed by creating and maintaining surfaced paths in the most vulnerable areas. In the past, stone that is a natural feature of the site, such as scattered rocks and screes, has been plundered for use in walls and footpath repairs. As such natural features are a limited resource, being part of the geological story of the site and also providing a refuge for plants and breeding birds, stone should not be taken. If stone is required for path repairs for example, it would likely be brought in from nearby quarries and be of a suitable type that would blend in with the landscape and which would not confuse the geology. Elsewhere, peat erosion is so severe that other remedial measures, such as temporary fencing to exclude people and livestock, creating peat dams and other stabilisation measures, may be necessary to restore badly damaged areas.

Some habitats have been damaged by off-road vehicles. Landowners and occupiers should co-operate with the police and other statutory bodies to undertake enforcement action where possible and to discourage illegal use by off-road vehicles.

Although the soft nature of much of the sandstone rocks do not lend themselves to rock climbing at this site, the situation needs to be monitored and be subject to a code of conduct in order to avoid any damage habitats and disturbance to wildlife. Uncommon plants on the cliffs and ledges may be dislodged by climbers and some breeding birds are particularly sensitive to disturbance during the nesting season.

Students and researchers need access in order to study the geology, glacial landforms and active erosion and depositional processes. This should not be a problem as many of these features occur on the open mountain, however some do occur on private land and therefore access permission would be required from the landowner.

Crags with a rich moss flora GS Motley©CCW

- **Burning and Cutting**

  Although much of the heath may be left with minimal intervention (particularly where it can regenerate by layering) burning and cutting can be useful, helping to create a structurally diverse mosaic of dwarf shrub vegetation. This management can also benefit birds such as red grouse, provided it is carried out in an appropriate way, preferably as part of an approved management plan. Cutting is an alternative to burning, and can also be used to create firebreaks. If cutting is carried out, the resultant litter may need to be removed, in order to avoid inhibiting seedling germination. Machinery must not damage fragile peat soils.

  Sites suitable for burning and/or cutting should be chosen carefully and management reviewed regularly. Heathland, rich in lichens, should not generally be burnt or cut and such management should not encourage the spread of bracken or the growth of rank grasses like purple moor-grass.

  Blanket bog and wet heath should not normally be burnt, as this is likely to damage important plant and animal species. Burning around rock outcrops, screes and large boulder fields would also damage lichens, and other specialised plants found here.

- **Drainage**

  The bogs, wet heathland, springs and flushes are all vulnerable to drying out as a result of drainage. The natural drainage pattern must not be altered. It may also be desirable to block some existing drainage channels to restore water levels and prevent the bogs and peat from eroding. Some restoration work is being carried out at Waun Fignen Felen.

Eroding peat bog at Waun Fignen Felen GS Motley©CCW

- **Soil Fertility**

  Soil fertility at this site is naturally low and the application of any agricultural fertilisers, including slurry and manure, will have a detrimental effect on the upland vegetation. Supplementary stock feeding can also lead to localised damage of the sward and cause poaching and gradual nutrient enrichment. This activity should be discouraged within the site, but if supplementary feeding is necessary during prolonged periods of bad weather, the location of feeding stations would be chosen in consultation with CCW so as to prevent damage to sensitive vegetation.

- **Engineering works**

  Works to the show caves, tracks, paths and historic features should be undertaken sensitively. Such should not interfere with the natural habitats and drainage patterns. If work results in damage to the existing vegetation, there should be a requirement to restore the vegetation to its original character and quality.

- **Visibility of geological features and landforms**

  Most of the areas displaying above ground geological and glacial landform features are grazed which helps control vegetation growth. Woodland and scrub development should not be encouraged in areas where these features may be obscured.

- **Pollution/Acidification**

  Several widespread ongoing human-induced processes are changing the environmental and ecological conditions and are causing concern at Mynydd Du and in other upland areas in Britain. These include acidification of rain and soils, due to atmospheric pollution, and nutrient enrichment (especially increased nitrogen and phosphorus), through a combination

of atmospheric pollution, excessive dunging/urination in areas where stock preferentially graze and other inputs from diffuse sources. Mosses, liverworts and lichens are particularly vulnerable to pollution from atmospheric sources.

Much of this atmospheric pollution comes from distant, diffuse sources, such as traffic and domestic emissions, but some can be attributed to large point sources, such as major power stations or industrial processes. The industrialisation of the south Wales valleys in the nineteenth century has had a lasting effect on the upland vegetation. If particularly damaging current point sources (or groups of point sources) can be identified, then emissions should be regulated to reduce the impacts. However, it will also be very important for wider measures to be taken, at Government and international levels, to reduce air pollution.

**Finally**

Our knowledge and understanding of wildlife is continually 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, in particular, of the possible impact of climate change. Any information you can provide on the wildlife of your site, its management 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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