

## Views About Management



### **A statement of English Nature's views about the management of North Dartmoor Site of Special Scientific Interest (SSSI).**

This statement represents English Nature's views about the management of the SSSI for nature conservation. This statement sets out, in principle, our views on how the site's special conservation interest can be conserved and enhanced. English Nature has a duty to notify the owners and occupiers of the SSSI of its views about the management of the land.

Not all of the management principles will be equally appropriate to all parts of the SSSI. Also, there may be other management activities, additional to our current views, which can be beneficial to the conservation and enhancement of the features of interest.

The management views set out below do not constitute consent for any operation. English Nature's written consent is still required before carrying out any operation likely to damage the features of special interest (see your SSSI notification papers for a list of these operations). English Nature welcomes consultation with owners, occupiers and users of the SSSI to ensure that the management of this site conserves and enhances the features of interest, and to ensure that all necessary prior consents are obtained.

## Management Principles

### **Valley mire**

Fen often develops within valleys and the origins and movement of the water within the fen give rise to a number of different vegetation zones. The variety of plant and animal life in the valley mire is closely linked to the number and type of zones it contains.

Management should aim to maintain the groundwater quality and quantity, though the quantity is not likely to be naturally constant throughout the seasons or between wet and dry years. The groundwater is often susceptible to contamination by agricultural fertilisers, or by pollution leaking from landfill sites.

Grazing is important in the management of the valley mire. Animals help to break up the tussocks of rank grasses such as purple moor grass, opening the sward up to a greater variety of plants. The precise timing and intensity of grazing will vary according to local conditions and requirements. Some (but not excessive) trampling is necessary to create open soil, for invertebrates, mosses and seedling establishment. Grazing also limits the spread of willow, alder and birch carr, which naturally tends to develop around the central watercourse and it should be restricted to this area, other than for a few isolated clumps elsewhere for the benefit of birds and invertebrates.

Swamps are also important for invertebrates and birds and the inclusion of some swamp vegetation, such as reedbed, within the mosaic of habitats present will add to the conservation value of the site. However, excessive spread of reed, reed canary grass, or reed sweet grass is likely to be an indication of worsening water quality, the cause of which should be investigated and addressed to maintain the characteristic fen communities.

Stock feeding, or the location of grazing infrastructure, for example stock shelters, should take place downstream of the valley mire. This is to ensure the mire vegetation does not become enriched by nutrients from animal food or dung, or even from carcasses, causing unwanted changes in the composition of the characteristic mire vegetation in favour of tall, species-poor communities.

Drainage schemes should not intercept the sources of ground and surface water to the valley mire. It is important for the watercourses of the valley mire not to receive run-off from fertilised land or surface water from farmyards. The bed of the watercourse should not be lowered, nor should its water level be artificially raised, other than as part of a well thought-out conservation scheme. This will ensure the various vegetation components of the valley mire are maintained in their ideal proportions, and that 'head-ward' erosion is not triggered, in which increased flow gradually erodes the peat and silt on which the valley mire has developed.

### **Blanket bogs**

Blanket bogs are a peatland habitat confined to cool, wet climates. Peat forms where certain plants decompose very slowly under waterlogged conditions. In ideal circumstances, the peat develops over large expanses of uplands, effectively 'blanketing' them. The wet, nutrient-poor growth conditions provided by peat means that the bogs and their associated pools support unique communities of specialised plants and animals. They can also be important habitats for breeding populations of wading birds.

Many of these habitats have traditionally been managed for livestock and/or for grouse shooting. Where this management has been intensive, damage may have occurred through overgrazing, burning and drainage. However, the nutrient-poor and waterlogged conditions of blanket bogs that are not degraded and are in 'favourable' condition often means that very little management is actually needed and such sites should require little intervention. On some sites light grazing may be beneficial. This can be used to control the development of invasive vegetation on the blanket bog, especially on those sites that may have suffered from drainage and previous intensive management. However, care needs to be taken in deciding the precise timing and intensity of grazing. As a general rule, the wetter a site is, the greater the sensitivity to grazing. Light summer grazing by sheep is likely to be an acceptable regime. Heavy grazing must be avoided, as it may lead to an increase in the cover of grazing tolerant plants and a consequent reduction in the extent of important moss and lichen species. However, the dominance of purple moor-grass on degraded blanket bogs can be reduced by summer grazing with cattle and ponies.

Burning blanket bog can also reduce its conservation value by reducing the diversity of plant and animal species present on the bog, and should not be introduced on high

quality blanket bog. On peat, burning can gradually lead to an increase in the cover of heather to the exclusion of other plant species. Certainly, sensitive areas, such as those that contain pools should not be burnt, as it can be very damaging to the invertebrate and amphibian populations that they support. Burning can also damage the peat soils themselves and can prevent the formation of new peat. This can result in peat erosion and the loss of peat by wind or water. In areas where the risk of accidental fires is high, firebreaks can be cut, providing care is taken when using the necessary machinery to avoid damage to the underlying peat.

No new drainage should be introduced to blanket bogs and deepening of any existing drains or grips should be avoided. It is likely to be necessary to block existing drains to prevent further drying out of the bog and damage to peat soils. On sites that have been degraded, it may be necessary to undertake further restoration works. It is also important to protect peat and peat-forming systems, as they can hold a significant store of carbon.

### **Upland heath/acid grassland mosaic**

Some of the slopes on this site are covered with acidic upland grassland of a type restricted to South-West England. In many areas this vegetation forms a mosaic with heather and bilberry dry heath. In other areas, there are extensive tracks of unbroken dry and wet heath. For clarity, the requirements of these vegetation types are now described separately.

### **Wet and dry upland heath**

Dry upland heath develops in nutrient-poor, acidic conditions and is dominated by dwarf shrubs, especially heather. Wet upland heath occurs in areas where peat accumulation results in damp, nutrient poor soils, which allows plants such as heather, cross-leaved heath and deergrass or cottongrass to dominate the vegetation.

Upland heaths can support a rich variety of plants and animals, including many rare and scarce species of plants, birds and invertebrates. The physical structure of the vegetation is one of the reasons for this; a good mixture of large, old dwarf shrubs along with patches of shorter vegetation will provide feeding, breeding and sheltering areas needed by birds, insects and other plant species.

Dry upland heaths have a long history of active management. Grazing is a very important form of management but must be carefully managed. The numbers and types of grazing animals present as well as the duration and time of year of grazing are all important in determining the value of the vegetation to wildlife. Too little grazing could, in the long term lead to excessive domination of trees and shrubs. Too much grazing (especially in the autumn and winter whilst plants are not actively growing) leads to loss of dwarf shrubs and domination by grasses and rushes. Increasing altitude and wetness reduces the ability of moorland vegetation to cope with grazing pressure. Supplementary feeding can also have a significant effect on vegetation and cause damage.

On sites where grazing has been heavy in the past, a period of no grazing, or very low grazing levels can be beneficial as it allows dwarf shrub plants that have been suppressed to recover in size and vigour.

The impoverished growing conditions of areas of undisturbed wet heaths mean that usually very little management, if any, is needed to maintain them. On some wet heaths, management may be necessary to prevent the invasion of shrubs and trees. This should be no more than very light summer grazing, with stock removed during the autumn and winter. Heavy grazing can lead to a decline in characteristic dwarf shrub cover in favour of grass and sedge species and should be avoided. Heavy grazing can also lead to excessive poaching and erosion of the peat.

Burning has both advantages and disadvantages which should be carefully weighed up on a site by site basis, in discussion with English Nature. Burning can be helpful in influencing how grazing animals distribute themselves across the site, for the provision of firebreaks (to control possible wildfires) and some species may benefit from the breaking up of large stands of even-aged heather. However, burning can also be damaging and reduce structural diversity. Some plant species are sensitive to burning and could be lost and excessive burning could result in insufficient cover of the mature heather needed by some nesting birds (e.g. Merlin). Burnt sites, especially with thin soils and steep slopes can be vulnerable to soil erosion. Burning can also encourage bracken or gorse invasion (which benefit from the nutrients released from the ash).

If burning is carried out, it should only be undertaken during the winter and should follow an appropriate burning rotation in order to create a mosaic of habitats with vegetation of different ages, composition and structure, which in turn supports a wide diversity of species. Areas with particularly sensitive species or habitats should be identified and avoided. Burning should not be carried out unless a suitable grazing regime is in place because heavy grazing of land that has recently been burnt (especially in winter) can prevent regeneration of the dwarf shrubs and lead to a rapid conversion of the site to grassland.

Burning can be damaging to the sensitive areas of wet upland heath and cause damage to peat soils. Special care should also be taken where burning is practised, and burning should not be introduced on high quality wet heaths.

Cutting is a possible alternative to burning on dry heath. If cutting is used, care must be taken to remove the resultant litter, or germination of seedlings will be inhibited. Cutting can be usefully employed to create firebreaks. However, care must be taken when using the machinery required for cutting as this can be damaging to fragile peat soils, in particular those of wet heaths and the use of machinery should be avoided where possible on wetter areas.

Any artificial drainage is damaging to wet heath plant and animal communities and should be avoided. Drainage can have a number of damaging effects on both the wet heath and the surrounding environment through, for example, lowering of the water table, increased erosion of peat, siltation of streams and rivers and increased risk of flooding. It is likely to be necessary to block existing drains to prevent further drying out of the heath and damage to peat soils. On sites that have been degraded, it may be necessary to undertake further restoration works.

### **Upland semi-natural woodland**

Past and present management, high rainfall and relatively clean air are all factors which have helped make upland woods home to a wide range of species and plant communities which are scarce or absent in lowland woodland. Upland woods may be home to a number of rare flowering plants and are often rich in mosses, liverworts and lichens. They can have a very distinctive bird fauna, including species such as redstart and pied flycatcher, and are also valuable habitats for invertebrates and mammals.

Most upland woods were once managed as coppice, being cut on regular rotations for the oak bark and charcoal industries. However, most of this coppicing stopped in the nineteenth century. As a result the woods developed more importance as shelter for domestic stock and much upland woodland is now grazed high forest. This, combined with increasing levels of grazing by deer, means that most upland woods are likely to benefit from some reduction in grazing pressure to allow the ground flora and shrub layer to recover. Grazing may need to be removed altogether from some woods, at least in the short term, to allow the natural regeneration of tree species. Temporary fencing, or the maintenance of walls around woods, may be suitable methods of stock control.

That said, it should be remembered that grazing has helped to develop the valued features of some upland woods. For example, some grazing appears to benefit characteristic woodland birds like pied flycatcher, and it also helps to maintain the light, open conditions that can benefit some moss and lichen communities. Careful thought needs to be given to the benefits of excluding stock, from which parts of the wood and for how long.

In some woods it may be appropriate to re-introduce coppicing, for example if a wood has very good butterfly populations that would benefit from an increase in more open, light conditions. However, re-introducing coppicing will certainly not be suitable for all woodlands. In most cases the retention of high forest, with its more complex structure and rich moss and lichen communities, will be the best form of management.

Further intervention may be required to combat the effects of invasive non-native plants. *Rhododendron*, in particular, is a major threat to many upland oakwoods, smothering the ground flora and inhibiting the natural regeneration of tree species. It should be removed wherever practical.

In other cases, all or part of a wood can be left to develop naturally without any active management. For example, wet woodland - which tends to be dominated by species such as alder, willow and birch - is a scarce habitat in the uplands and is likely to benefit from minimum intervention.

Dead wood, both fallen and standing, can be of considerable value to wildlife, particularly fungi and invertebrates and should be retained where present, providing that it is safe to do so. Dead wood tends to be a scarce habitat in the uplands because so many upland woods have been managed as coppice in the past.

Often, upland woodland will lie next to moorland habitats which may be managed by burning. Burning is entirely inappropriate for the management of woods and fires on adjacent land should not be allowed to run into them.

As a general rule, those woods that have been under-planted with conifers should be restored. Where appropriate, native woodland should be allowed to naturally expand, although it is important that this is not at the expense of other upland habitat which has its own nature conservation importance.

### **Mosses & lichens**

The key management principal for the management of mosses and lichens on trees in woodland is to ensure that there is continuity of substrate i.e. there is an age range of trees to ensure opportunities of succession as the trees age. Veteran trees may require pollarding at intervals to extend their life span.

The rich moss and lichen communities that have developed within the long established woodland are highly sensitive to changes in environmental conditions, especially events that may affect exposure to sunlight, humidity and nutrient enrichment. In many cases they may be subject to becoming overgrown by ivy and shaded or scratched by shrubs such as rhododendron and holly respectively. Where there is established lichen and moss cover on a tree new ivy invasion or well established ivy should be controlled under specialist supervision. Great care should be taken not to plant in such a way that local conditions of light and exposure of the established trees might be significantly affected. The application of pesticides, including herbicides and fertilizer will often be damaging and are best avoided. If they must be used, caution may be needed in lichen and moss-rich areas e.g. ensuring the use of wetting agents and consideration given to injection rather than spraying.

One of the most serious threats to mosses and lichens arises from nutrient input on adjoining agricultural land, especially fertilizer drift and slurry application, as well input from airborne faeces particles, all of which can cause nutrient enrichment of the bark and the consequent loss of species. Mosses and lichens on rocks are vulnerable to physical disturbance and measures to limit damage caused by recreation may be necessary in some areas.

### **Upland breeding bird assemblage**

This site supports a diverse upland breeding bird community. The range of species depends on the above habitats and in general the management described above will meet their needs. There may however be circumstances when specific management measures are needed to ensure the well-being of a species. In these situations the management will be discussed and agreed on a case by case basis.

### **All habitats**

The habitats within this site are highly sensitive to inorganic fertilisers and pesticides, applications of which should be avoided both within the site itself and in adjacent surrounding areas. Herbicides may be useful in targeting certain invasive species, but should be used with extreme care. Access to this site, and any recreational activities within, may also need to be controlled.

**Comment [SM1]:** No generic text yet – to be inserted.

### **Unique or Finite Mineral, Fossil and Other Geological Interests**

The geological interests at this site are finite and irreplaceable. The main management principles are to conserve the resource in the long-term, while permitting scientific usage, which often involves collecting specimens. Balancing these two opposing principles is the key to long-term positive management.

Judgment of how much collecting can be permitted, while sustaining the resource, must be made on a site-by-site basis. Collecting of specimens requires very careful management to ensure that the geological resource is conserved. Where there is any doubt, caution should be applied before removing or allowing any material to be removed.

Sites with a unique or finite geological resource are particularly sensitive because they are often small and the important interest features are typically restricted in volume. In addition to specimen collecting, any activity which conceals or requires removal of part or all of the geological interest features can cause irreparable damage or destruction.

Vegetation management, involving removal of large trees and scrub, may be required to recreate or maintain exposure of the geological features. In some cases, removal of rock debris and loose material from faces may be required.