

Views About Management

A statement of English Nature's views about the management of Charnwood Lodge 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

Dry and wet lowland heath

On this site, a mosaic of both wet and dry heath communities occur. Heathland supports the greatest diversity of plants and animals (including a diverse invertebrate fauna and a number of characteristic bird species) where management maintains the open nature of the heath and by promoting a varied structure of uneven-aged stands of native heathers and other characteristic plants. It is generally beneficial if all stages of the heather life cycle are present. Without such management, heathland becomes progressively dominated by bracken, gorse and, on wet ground, purple moor grass tussocks. Eventually scrub and trees will invade. The precise management requirements will vary both between and within sites according to the needs of the different heathland interests present and site conditions.

Low intensity grazing is a suitable means of managing areas of dry heath. Generally areas of wet heath require limited management but light grazing may also be useful for maintaining the variation in vegetation composition and structure, and for controlling invasive grasses such as purple-moor grass. By feeding selectively in different areas and on different plants, free-roaming livestock help to maintain variation in the vegetation composition and structure. They can also suppress scrub encroachment and provide some light poaching to create small pockets of bare peat

and sandy ground that are of benefit to a variety of specialised plants, invertebrates and reptiles. Sheep grazing is an acceptable method of management but cattle or hardy ponies may also be used, although care must be taken to avoid damage to the heather by trampling. An appropriate stocking rate should take into account local conditions and the timing and length of grazing, but an off-take of between 30-40% of the current growth increment is desirable. Heavy grazing should be avoided on wet heath as it can lead to a decline in characteristic dwarf shrub cover in favour of grass and sedge species, as well as excessive poaching and erosion of the underlying peat.

Alternatively, cutting or mowing may be useful options for managing dry heath where a mosaic of patches of heather of different ages is desired. The cut material should be removed to avoid nutrient accumulation on site and to allow the cut plants to re-sprout successfully. However, mowing or cutting may not be suitable on wet heath or on mature stands of dry heath of importance for rare reptiles.

Prescribed burning can also be a useful tool for maintaining the structural diversity of some dry heathlands and for re-establishing areas of pioneer heath required by certain species, but special care is required when sensitive species are present and burning should not be used on wet heath vegetation. Burning must be used with caution, as inappropriate burning can be very damaging to both plant and animal communities and careful consideration should be given to the timing of the burn.

There is some benefit in retaining a few scattered individual trees and some small patches of scrub. For example, the maintenance of scattered mature Scots pine in undisturbed locations will provide suitable nest sites for hobbies. However, this should not encroach on the open nature of the habitat, and mechanical control or manual cutting followed by the careful application (spot application on areas of wet heath) of a suitable herbicide may be necessary to prevent this. Bracken invasions may need to be controlled in the same way.

Where gorse is present, scattered stands with a bushy structure rather than large continuous blocks are of greater benefit to the characteristic bird and invertebrate species associated with gorse scrub. Winter cutting of 'leggy' stands of gorse and the removal of cut material will maintain gorse at different stages of re-growth and avoid nutrient accumulation in the soil.

Although careful maintenance of existing ditches and drains is usually acceptable, the abandonment or deepening of ditches or drains should be avoided. Water levels within areas of wet heath should be maintained to avoid adverse changes to the characteristic plant composition of the habitat. In some instances it may be appropriate to restore natural drainage where this is possible.

Lowland acid grassland

Free-draining, acidic soil is the key requirement of the grassland communities at this site, but their maintenance also depends on active management. If neglected, the sward becomes dominated by tall, vigorous grasses or bracken which, together with an associated build up of dead plant matter, suppress less vigorous species and reduce the botanical richness of the site. Eventually the sward reverts to scrub and even woodland. Traditionally, management has consisted of stock grazing and this remains

the most appropriate management tool. Grazing, through the removal of plant matter and nutrients, helps to maintain an open sward of small tussocky grasses. It also, through disturbance and trampling, creates areas of open ground suitable for colonization by the lichens, ephemeral plants and invertebrates that are often characteristic of this type of grassland. However, rabbit grazing, though difficult to control, can also be a useful management tool in some situations. Occasional management of invasive scrub and bracken may be necessary.

Broadleaved semi-natural woodland

There are many different ways in which broadleaved woodland can be managed to conserve its value for wildlife. The following gives broad views on a range of regimes that may be appropriate on your site.

A diverse woodland structure, with open space, a dense understory, and a more mature overstory is important. A range of ages and species within and between stands is desirable. Some dead and decaying wood, such as fallen logs, can provide habitats for fungi and invertebrates. However, work may be needed to make safe dangerous trees in areas of high public access. Both temporary and permanent open spaces benefit groups of invertebrates such as butterflies. They may require cutting to keep them open, and should be of sufficient size to ensure that sunny conditions prevail for most of the day.

Felling, thinning or coppicing may be used to create or maintain variations in the structure of the wood, and non-native trees and shrubs can be removed at this time. To avoid disturbance to breeding birds the work is normally best done between the beginning of August and the end of February. Work should be avoided when the ground is soft, to prevent disturbing the soil and ground flora. Normally successive felling, thinning or coppicing operations should be spread through the wood to promote diversity, but where there is open space adjacent plots should be worked to encourage the spread of species that are only weakly mobile. Natural regeneration from seed or stump regrowth is preferred to planting because it helps maintain the local patterns of species and the inherent genetic character of the site.

Deer management and protection from rabbits or livestock are often necessary. Whilst light or intermittent grazing may increase woodland diversity, heavy browsing can damage the ground flora and prevent successful regeneration. Invasive species, such as *Rhododendron* or Himalayan balsam, should be controlled.

Parts of a wood should be left unmanaged to benefit species that do best under low disturbance or in response to natural processes. Within these areas some trees will eventually die naturally and dead wood accumulate.

Ponds

Both natural and artificial ponds can support a wide range of aquatic plants, and as many have few or no fish, they are often important habitats for amphibians and invertebrates. Some ponds may only contain water during certain periods of the year, and these temporary ponds are important for a specialised group of plants and animals which depend on the seasonal nature of the habitat. It is important that temporary ponds are not over-deepened or made into permanent ponds.

Ponds often require periodic management to prevent a build up of plants and silt which will reduce water depth and cause a build up of nutrients. However, on a site containing many ponds it may be desirable to maintain a range of ponds in various stages of succession, and some could be left to develop into damp muddy hollows whilst the value of the overall pond habitat may be maintained through the creation of new ponds nearby. Silt and plant material should only be removed from a portion of the pond at any one time, allowing sufficient time for recovery before other areas are dredged. A range of water depths should be retained and the importance of exposed muddy margins should not be overlooked. It is important when dredging artificial (and even some natural) ponds that any impervious lining is not broken.

The relatively small area and water volume of ponds means they are particularly vulnerable to pollution events, and accidental spillages may affect a whole pond. Increased nutrients may cause a loss of aquatic plants and increases in algal growth, whilst silt inputs may smother plants and lead to rapid infilling. Management of the pond and the surrounding areas should aim to maintain good water quality by limiting inputs of silt and nutrients.

The introduction of bottom feeding coarse fish, which uproot plants and disturb pond sediments, may also cause a loss of aquatic plants and increases in algal growth, as can the control or removal of aquatic plants. Ponds are also susceptible to invasion by non-native aquatic plants such as Australian swamp stonecrop and parrot's feather. These species are able to grow rapidly, taking up available habitat and smothering other plants. These plants should be removed as soon as they are observed. Some native species such as duckweed species are also able to take over in this way, but such growths are usually exacerbated by increased nutrients in the water.

Changes to the use of surrounding land can alter the amount of water reaching the pond, often resulting in the pond drying out. Ponds may be particularly vulnerable where large volumes of groundwater are abstracted nearby.

Artificial standing waterbodies

Artificial standing waterbodies include manmade lakes, reservoirs, gravel pits, subsidence pools, and flooded peat diggings. They may support wildlife equal to that of natural lakes, and can be important habitats for a range of specialised aquatic plant and animal species. They often support important populations of wintering wildfowl and breeding bird assemblages, as well as a varied invertebrate fauna (in particular dragonflies and damselflies).

Conservation value is largely determined by structural diversity and water quality. Increases in the amount of nutrients within the waterbody can lead to a loss of aquatic plants in favour of excessive growths of algae. This may result in a fundamental shift in the way a waterbody functions, reducing plant and invertebrate abundance and diversity, both of which are important food sources for a range of wetland birds. Increases in the amount of sediment entering a lake may smother stony beds and plants, reduce water depth in shallow lakes and also increase the amount of nutrients present. Some lakes may also be susceptible to acidification though control of this will require action at a catchment scale.

Sympathetic management of water levels is necessary for the maintenance of optimal water depths throughout the year (according to the requirements of the plant and animal species present). For example, the presence of extensive shallow water and wet marginal substrates will provide the feeding conditions required by a variety of wintering, passage and breeding wildfowl, such as dabbling ducks and waders, whilst other species may require areas of water at least 3 metres in depth. Water level management should take into account the requirements of submerged aquatic plants that are restricted to areas where there is sufficient light for growth and minimal wave action. In shallow waterbodies (with an average water depth of less than 3 metres) plants may be able to grow throughout the waterbody, whilst in deeper waters plants will be restricted to the shallow margins. Changes in water levels can also alter nutrient regimes.

Management should aim to maintain the habitats associated with shallowly sloping margins that are not too exposed to wave action, as they are important for many species associated with standing open waters. For example, the maintenance of structural diversity within and between stands of aquatic vegetation (including emergent, floating and submerged vegetation) can provide important habitat for the immature stages of different dragonfly and damselfly species that require a wide variety of vegetation types.

Artificial waterbodies are susceptible to the introduction of invasive species, such as non-native crayfish, bottom feeding coarse fish, and plant species such as Australian swamp stonecrop, therefore some management may be necessary to control these. Where native crayfish are present any measures which may limit the risks of transferring non-native crayfish or crayfish plague (such as information and awareness-raising initiatives amongst visitors to the waterbody) should be encouraged. The control or removal of the natural aquatic vegetation can lead to a decrease in aquatic plants in favour of algae, and should therefore be avoided.

Standing waters and their surroundings are often also a popular environment for recreational activities such as angling and boating which should be managed sympathetically to avoid conflict with the management of the waterbody for nature conservation.

Species interest

The vascular and lower plant flora and bird and invertebrate fauna of the site is of special interest. The species are found in 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 managed.

Inland outcrops and stream sections (EO sites)

The ideal management for natural inland geological sites is the maintenance of rock exposure free of vegetation and, in some cases, the build-up of rock debris. Management usually involves periodic clearance of vegetation and rock debris. Vegetation growth is a problem on many sites, because erosion rates are usually too low to naturally maintain fresh exposure of the geological features.

It may not be always practical or entirely necessary to maintain full exposure of the geological features on a site. Site management will often involve defining specific areas that need to be kept clear of vegetation and rock debris.

Collecting of geological specimens may be acceptable if undertaken in a responsible manner. However, there are some sites where the geological interest is very finite in nature and over-collecting can result in damage or destruction of the interest. Collecting of specimens requires very careful management to ensure that the geological resource is conserved.

The main threats to conservation of inland geological sites are developments that obscure the rock exposures. Tree planting can also conceal rock exposures.