

Views About Management

A statement of English Nature's views about the management of Priory Meadows, Hickling 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

Flush and spring fen

Groundwater sometimes breaks out on the surface, either via gentle seepages, which give rise to flushes, or through greater flows that are evident as springs. Groundwater is rich in dissolved minerals, picked up during its passage through soils and rocks. The resulting water chemistry and degree of flow at the point where groundwater breaks out determine the type of plants and animals that occur in and around springs and flushes. Mosses, liverworts, sedges and rushes are common and often predominant plant species in flush and spring fens and several species of orchid are also associated with these communities. Flush and spring fen may also be a component of other types of fen, such as valley mire and basin mire.

The maintenance of the characteristic composition and diversity of flush and spring fens is dependent on a number of factors operating both at the surface and below ground. The quantity and quality of the groundwater must be maintained, though the quantity is not likely to be naturally constant throughout the seasons or between wet and dry years. The groundwater comes from aquifers, and these may become depleted due to abstraction or failure to recharge. They may be contaminated by agricultural chemicals such as fertilisers. When this has occurred, the characteristic sward of short herbs and mosses will be replaced by rank grasses, reeds and nettles.

Changes in flush and spring vegetation as a result of changes in the quality and quantity of the groundwater that feeds them are important indicators of the condition of the groundwater aquifer.

Grazing is often necessary to keep the vegetation short and open around springs and flushes. The precise timing and intensity of grazing will vary according to local conditions and requirements but should aim to keep a relatively open sward without causing excessive poaching. Light trampling by grazing animals can be of benefit in moderation by breaking down leaf litter and by creating areas of bare soil, needed by some invertebrates and mosses and for seedling establishment.

Drainage schemes should be designed not to intercept the source of groundwater to springs or flushes, or to reduce the area of surface they irrigate. The application of fertiliser, lime, pesticides and herbicides would be damaging and should only be used down slope of the flush or spring on land that is not of special interest, and should be kept clear of any wetland fed by the flushes or springs.

Marshy grassland

Wet grassland requires active management if it is to retain its conservation interest. Generally, each year's growth of vegetation must be removed. Otherwise the sward becomes dominated by tall, vigorous grasses and rushes which, together with an associated build up of dead plant matter, suppress less vigorous species and lower the botanical richness of the sward. Traditionally, this management is achieved by grazing. Cattle are often the preferred stock, being relatively tolerant of wet conditions and able to control tall grasses and rank vegetation. Cattle also tend to produce a rather uneven, structurally diverse sward. However, ponies, or even hill sheep, can be used if necessary. Grazing usually takes place at times between late spring and early autumn, but the precise timing and intensity will depend on local conditions and requirements, such as the need to avoid trampling ground-nesting birds. Heavy poaching should be avoided but light trampling can be beneficial in breaking down leaf litter and providing areas for seed germination. An element of managed scrub can be of importance to birds and invertebrates. Careful maintenance of existing ditches and drains is acceptable practice, but abandonment or deepening of ditches can be harmful. Cultivation, increased drainage or the application of pesticides, including herbicides, or fertilizer is likely to be damaging and should be avoided.

Areas of wet woodland such as alder and willow carr around the fringes of the wetland usually benefit from minimum intervention and are best left undisturbed.

Ditches

Ditches are artificial habitats created by land drainage, or occasionally by the channelisation of small streams. Some of the largest ditch systems are commonly found in areas of extensive wetland such as river floodplains, fens or in coastal situations where land may have been reclaimed from the sea. Ditches of greatest wildlife value are generally those created within former wetland areas where the ditches may represent the only remaining freshwater habitat and often support a wide range of aquatic plant and animal (in particular invertebrate) species that would have previously been more widespread in ponds and wetlands.

As artificial habitats, ditches require active management if they are to retain their wildlife interest. Left unmanaged silt accumulates in the bottom of the ditch and emergent plants such as reeds are able to colonise across the width of the ditch, leading to a loss of aquatic plant diversity and a gradual drying out of the ditch. To prevent this, periodical removal of sediment and vegetation may be necessary to return the ditch to an early stage of the management cycle. Ideally, ditch management should be undertaken on a rotation creating a series of different management stages across a site at any one time. All stages of the management cycle have wildlife interest - recently cleared ditches are good for plants and animals which favour newly created habitats and cannot tolerate competition with other species; middle-stage ditches support a rich aquatic plant flora; and late-stage ditches may be important for a variety of invertebrates. The removal of both sediment and vegetation is usually better than simply cutting the vegetation, which does not recreate the earliest stages of the ditch management cycle. Where possible, management should aim to create shallow shelving margins rather than steep ditch sides. Where water voles are known to be present, the relevant good practice guidelines for ditch management and conservation should be followed.

Water quality and water level management are important components of ditch system management. In common with other freshwater habitats, ditches are susceptible to increased levels of nutrients (as the result of waste water discharges or inappropriate land management within the catchment), which at excessive levels will cause a loss of aquatic plants and increases in algal growth. Other activities that can lead to a decrease in aquatic plants in favour of algae include the control or removal of aquatic plants or the intentional, or accidental, introduction of species such as bottom feeding coarse fish which uproot plants and disturb ditch sediments.

Most ditch systems are subject to water level control, which should be managed to ensure that there is a sufficient depth of water (0.3-0.5m) in ditches throughout the year. Rapid or extreme changes in water level should be avoided.

Ditches are particularly susceptible to invasion by non-native aquatic plants such as floating pennywort and water fern, which are able to grow rapidly taking up available habitat and smothering other plants. Some native plants including a number of duckweed species are also able to take over in this way (although such growths are usually exacerbated by increased nutrients in the water) and management may be necessary to control such invasions where they cause a problem.