

## Views About Management

### **A statement of English Nature's views about the management of Wretham Park Meres 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**

Natural waterbodies such as lakes and meres are an integral part of the landscape and are as important for their physical characteristics (such as shape, depth and shoreline profile) as they are for the range of aquatic plant and animal species they support. Often the sediment and microfossils that naturally collect in lake basins provide an important record of past environmental conditions including climate and land use change in the catchment, as well as conditions in the lake itself. The rich variety of wetland habitats frequently associated with natural waterbodies include extensive shallow and deep open water, vegetated margins, reedbed, fen, damp grassland, ditches, scrub and wet woodland, all of which can add considerably to the diversity of the habitats and species present. For example, natural waterbodies often support important populations of wintering wildfowl and breeding birds, as well as a varied invertebrate fauna (in particular dragonflies and damselflies).

Management should ensure that the natural characteristics of the lake are retained as far as possible. The nature of the plant and animal communities supported by lakes is determined by a number of factors, in particular water depth and nutrient availability, which act both within the lake itself and within the wider catchment. 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 birds, 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 lakes (with an average water depth of less than 3 metres) plants may be able to grow throughout the waterbody, whilst in deeper lakes plants will be restricted to the shallow margins.

Management should maintain the habitats associated with shallowly sloping margins that are not too exposed to wave action, where stands of emergent plants may develop, as they are important for many of the animal species to be found in lakes. For example, the maintenance of structural diversity within and between stands of aquatic vegetation (including emergent, floating and submerged vegetation) provides valuable habitat for the immature stages of different dragonfly and damselfly species that require a wide variety of vegetation types.

The protection of appropriate water quality is important for maintaining aquatic habitats and the range of species associated with them. The availability of nutrients and the maintenance of appropriate water quality within the waterbody is dependent on catchment geology and land use. Increases in the amount of nutrients within the waterbody (as a result of pollution from direct discharges and also from diffuse sources resulting from land management practices within the wider catchment) can lead to a loss of aquatic plants in favour of algae and impact on invertebrate species, both of which are important food sources for a range of wetland birds. Changes to the amount of water within the lake (by abstracting water from inflowing streams or raising the water level) can also alter nutrient regimes, as well as change the available area of some habitats. Increases in the amount of sediment entering a lake may smother stony beds, reduce water depth in shallow lakes and also increase the amount of nutrients present and should therefore be avoided. Other activities that can lead to a decrease in aquatic plants in favour of algae include the control or removal of the natural aquatic vegetation, or the intentional or accidental introduction of species such as bottom feeding coarse fish that uproot plants and disturb lake sediments.

In common with other freshwater systems, lakes are susceptible to the introduction of invasive species such as non-native crayfish or plant species, for example, Australian swamp stonecrop, and some management may be necessary to control these where they occur. Lakes 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 lake for nature conservation.

Other wetland habitats surrounding the open water may require some active management. For example, management should ensure that appropriate nesting and feeding conditions are maintained across the site for breeding, wintering and passage birds, including the maintenance of some open areas with unrestricted views and ensuring any sparsely-vegetated islands, bars and margins retain an open character and are kept free of invading vegetation. Large areas of wetland should be kept free

from disturbance during the breeding season, as well as during the winter months. Exposed areas of bare ground should be maintained to provide nesting sites for breeding terns where present. Dragonflies and damsel flies require the maintenance of a mosaic of open habitats such as grassland, reedbed and fen with plentiful herbs, scrub and small trees to provide ideal hunting habitat, as well as basking and perching sites that are open to direct sunlight but sheltered from the wind.

### **Swamp**

Swamp habitats develop on the fringes of open water and represent a stage in the process of succession from open water to dry land. Swamps usually consist of a single species of plant (such as reeds, sedges, reedmace, reed sweet grass, reed canary grass and bull rushes) with a few other species thinly distributed among them. Management should either seek to retain swamp in the same place (for example, reedbeds can be maintained by cutting following an appropriate regime), or where succession from swamp into fen is allowed, new opportunities for the development of swamp should be created elsewhere along the margins of the open water. The succession from swamp into tall herb fen may be slowed by raising the water table and by periodically removing scrub.

### **Fen**

Fen habitats (commonly composed of tall grasses and herbs, such as reed, willowherb, milk parsley, meadowsweet, angelica and nettles) usually require some management, such as rotational cutting or intermittent grazing to maintain the diversity of species present and to prevent the encroachment of scrub.

### **Wet woodland**

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