

Views About Management

A statement of English Nature's views about the management of Campfield Kettle Hole 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

Basin fen and mire

Basin fens form in topographic depressions, which are a common feature of the landscape and may be either natural (e.g. formed as a result of glacial processes, such as the kettle-holes of Cheshire and the pingos of East Anglia) or man-made (the result of sand and gravel extraction which has left similar but larger craters). These depressions fill with groundwater to form lakes, which, through a process of succession eventually develop into basin fen. When the vegetation builds up over the level of the groundwater (as plants die, consolidate and stack up) the vegetation becomes influenced by rainwater only and may support species similar to those of lowland raised bogs. Eventually, during the later stages of succession scrub and trees may take over, drying out the surface of the wetland and changing it into woodland.

The vegetation of basin fens is very variable and management must take into account the particular qualities of each example. The vegetation of basin fens is affected by groundwater and its level relative to the land surface, fluctuations in ground water level and its constituents. For example, some basin fens (such as those occurring in East Anglian pingos) contain what is known as 'rich fen' - a product of groundwaters containing moderate to high concentrations of base-rich minerals that are leached

from calcareous rocks or other natural geological deposits. Others are very acid with few such minerals and these are referred to as 'poor fen', which are more common on acidic deposits, such as quartzitic sand. Further variation is caused by the amount of plant nutrients available, such as nitrogen and phosphorus. Where nutrients are plentiful, the vegetation will be tall, with plants such as reed and bulrush, a type known as 'eutrophic' fen. The type of vegetation present will also be influenced by the degree to which natural vegetation succession has progressed towards closed woodland.

Although the surface of the fen vegetation may be above groundwater level, the deeper rooting plants may remain in contact with the aquifer. It is common for the land around the basin fen to slope towards it, so management must ensure that the local surface water that drains into the fen via ditches, or by seeping through permeable soils such as sand, is of appropriate quality.

The precise nature of the management required will vary between sites but some general principles apply. The characteristics of the water supply that has resulted in the development of that particular type of fen must be maintained. Unless the basin mire is important for its eutrophic fen, it is essential to exclude undue concentrations of nitrogen and phosphorus, any increase in which would result in the development of eutrophic fen in favour of the poor or rich fen vegetation, which would be lost. It is also important to ensure the water levels are sufficient to maintain the fen vegetation.

Basin fens are unlikely to be suitable for grazing animals. Open water and thin floating vegetation can lead to the loss of stock. Trampling is likely to damage the vegetation cover and its structure. If stock are present there should be no supplementary feeding on the basin fen, nor should there be any structures, such as animal shelters, likely to encourage stock to herd onto the fen and cause enrichment through dunging. Management may be necessary to prevent the encroachment of trees and scrub that can affect the fen by removing essential water, and by drawing up nutrients from deep groundwater, and then 'enriching' the surface through leaf fall. The proportion of trees and scrub present across the basin fen should be carefully evaluated and in most cases restricted to scattered stands for the benefit of birds and invertebrates.