Views About Management

ENGLISH NATURE

A statement of English Nature's views about the management of Erme Estuary 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

Littoral sediments (mud and sand flats)
Intertidal mud and sand flats include a range of generally muddy or sandy low-gradient shores that are exposed to air during low tide and submerged during the higher tides. High energy shores, such as those on open coasts, are generally sandy in nature whilst more sheltered, low energy flats are muddier. They support a wide variety of marine invertebrates that represent an important food source for many fish and bird species.

Good water quality and sediment quality should be maintained, and the sediment budget within the estuarine or coastal system should not restricted by anthropogenic influences.

The birds that use mud and sandflats for feeding and roosting are vulnerable to disturbance from human activities, for example, bait digging, dog walking and wildfowling. These activities can lead to reduced time spent feeding, or individuals being restricted to areas with a poor food supply. Disturbance should therefore be minimised, especially at times when bird populations may be stressed, such as during severe winter weather.

The location and extent of mud or sandflats is dependent on the extent to which the estuary or coast where they occur is constrained from responding to sea level rise and changing sediment regimes. Management needs to create space to enable landward roll-back to take place in response to sea-level rise, and should also allow the system to be dynamic and retain the flexibility to respond to associated changes such as the movement of physical features within the system, e.g. migrating subtidal sandbanks.

Inshore sublittoral sediment / Subtidal sandbanks

The seabed of inshore areas may be composed of a layer of sediment, usually sands and muds, known as inshore sublittoral sediments or subtidal sandbanks. These areas occur seaward of the low tide level and may be flat plains, or worked into forms such as sandbanks by the action of the tide. They support a range of seaweed, marine invertebrate and fish species, which in turn provide an important food source for birds.

Management should aim to maintain good water and sediment quality. The sediment budget must not be restricted by anthropogenic influences such as dredging, aggregate extraction, the construction of groynes and other coastal defence structures. The habitats are sensitive to physical disturbance, including abrasion and selective extraction.

These habitats must be considered in conjunction with adjoining coastal habitats and not in isolation from the wider issues of coastal management. The location and extent of subtidal flats and sandbanks is dependent on the extent to which the estuary or coast where they occur is constrained from responding to sea level rise and changing sediment regimes. Management needs to create space to enable landward roll-back to take place in response to sea-level rise, and should also allow the system to be dynamic and retain the flexibility to respond to associated changes, such as the movement of physical features such as subtidal sandbanks.

Sublittoral rock (subtidal reef)

The seabed of inshore areas may be composed of outcrops of bedrock or large boulders and may consist of many different types of geological forms from granites to sandstones, shales to chalk. These subtidal rocky reef areas are predominantly subtidal but may extend as unbroken transitions into the intertidal zone where they are exposed to the air at low tide. The reef structures provide a rich habitat for a range of seaweed, marine invertebrate and fish species.

The structure of a sublittoral reef is determined by exposure to wave and tidal action and light intensity which varies with depth. Shallower water communities are dominated by kelps and red algae with a shift to animal dominated communities with increased depth and subsequent increased light attenuation by seawater.

There is seldom a requirement for active management of the physical extent of sublittoral rock reefs however management should aim to maintain good water quality and reduced sediment loads to prevent smothering of the reef communities. Some of the communities are sensitive to physical disturbance, including abrasion from boat anchors, crab and lobster pots and particularly benthic fishing gear.

Littoral rock (rocky shores)
Rocky shores occur where rugged or relatively resistant terrestrial geology (bedrock and boulders) directly abuts the sea, forming a distinct transition between land and sea. A variety of different habitats and communities are associated with the area of rock between the highest and lowest tide levels - known as the foreshore or littoral zone - including rock pools, bedrock ledges and platforms, gullies, crevices and boulder fields. This wide variety of habitats supports a diverse range of different seaweeds and marine animal species, most of which are specially adapted to spending periods of time out of seawater.

There is typically a zonation of rocky shore communities, from the supralittoral marine lichens, to the upper, mid and lower shore, which are dominated by different species of brown seaweeds, to the sublittoral fringe with kelps. The greater the energy from wave action hitting the foreshore, the greater the dominance of animals such as barnacles, limpets and mussels, over seaweeds.

The key management principle for rocky shores is to allow natural processes, such as erosion and cliff collapse, to proceed freely. It is also important that management aims to maintain good water quality.

Certain activities, for example dredging and pipe construction, can cause direct damage to rocky habitats located on the foreshore, and management should aim to avoid or minimise any harmful effects. Management should also take into account the impacts of any anthropogenic structures which may deflect wave energy away from the foreshore. The turning of boulders for bait collection of peeler crabs can damage the delicate communities found on the underside of the rocks if they are not replaced in their original positions.

Coastal saltmarsh
Saltmarshes form the upper vegetated portions of intertidal mudflats in sheltered coastal locations, such as estuaries, lagoons and beach plains. There is typically a zonation of vegetation, from plants adapted to regular immersion by the tides (halophytes), through to more widespread plant species in the areas less frequently covered by the sea. The halophyte plant species are confined to this type of habitat, and areas of structurally diverse vegetation provide good invertebrate habitat. Saltmarshes are also important nursery sites for several fish species, and important refuge, feeding and breeding grounds for wading birds and wildfowl.

Where saltmarshes require management this has traditionally been achieved by grazing, and previously used regimes should be continued. Grazing provides a variety of different habitats, particularly for wintering bird species, and if grazing were to cease there may be a loss of botanical diversity. The precise timing and intensity will vary according to local conditions and requirements, for example the type or availability of stock, or the need to avoid trampling ground nesting birds. However on many sites, the aim will be to create a short turf that can be attractive to over-wintering wildfowl, with a reduction in stock density in the early summer for the benefit of ground-nesting birds. Indeed, careful reduction of grazing can increase the number of breeding birds, without significantly altering the plant species composition. Care should be taken not to overgraze the site, as this may reduce the diversity of

animal and plant species that the saltmarsh is able to support, as well as potentially impact the sediments supporting the saltmarsh.

Not all saltmarsh habitats require active management to retain their conservation interest. Where there has not been a history of grazing, the saltmarsh will be able to maintain itself and grazing-sensitive species are likely to be present, therefore grazing should not be introduced.

There are a number of factors that are contributing to saltmarsh change that management may need to take into consideration. These include coastal erosion as a result of coastal flood-defence works, rising sea-levels, variations in sediment deposition, and land claim for development.

Wet grassland with ditches and breeding and wintering bird interest

Wet grasslands occur on land that is subject to periodic flooding or has a seasonally high water table and is waterlogged for much of the year. Wet grassland often supports a wide variety of plants and animals, in particular birds and invertebrates, and is an important habitat for breeding waders and wintering wildfowl.

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.

In hay meadows grassland management is traditionally achieved by closing the fields to stock by February and cutting the spring growth as hay. The cut is usually done in early July, but the precise timing depends on local factors, including past management and weather conditions. It should always be after ground-nesting birds have fledged their young and any short-lived, characteristic plants have set seed. The aftermath is then grazed in late summer/autumn. Aftermath grazing is important for maintaining a species-rich sward, both through controlling competitive grasses and through hoof-prints providing suitable sites for seedlings to establish. Heavy poaching must be avoided, however.

On pasture the grassland is managed primarily 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 sheep, can be used if necessary. Grazing usually takes place at times between spring and winter, but the precise timing and intensity will depend on local conditions and requirements, such as water levels and the needs of wetland birds, including a predominantly short grassland sward during winter and spring and a low trampling pressure during spring to reduce the loss of nests. Heavy poaching should be avoided but light trampling later in the year can be beneficial in breaking down leaf litter and providing areas for seed germination. Management may also be required to control rush tussocks, for example by summer cutting. Agricultural operations in general should be avoided before mid-June to minimise disturbance to breeding birds or the destruction of nests.

Periodic dressings of well-rotted farmyard manure may be acceptable in hay meadows and on pasture if the sward does not receive regular input of nutrients from flooding. Lime should be used with caution. The grassland should not be re-seeded.

Partial winter flooding is important in maintaining suitable roosting and feeding habitat for wintering wildfowl and waders. A mosaic of shallow and some deeper flooded grassland and permanently un-flooded grassland is desirable, with both temporary and permanent pools present. Care should be taken on botanically rich grassland as changes in the historic water level regime can affect the composition of the sward. From April onwards, the area of standing surface water should be reduced to increase the area available for nesting waders. Some shallow areas of flooding (splashes) should be maintained until late June to provide patches of bare muddy ground on which the birds and their young can feed as feeding on the drier areas becomes more difficult.

Birds using grazing marsh are directly vulnerable to disturbance, which can cause them to lose time spent feeding or drive them to areas with a poorer supply of food. Management should seek to minimise any harmful disturbance, especially during their breeding period and at times when bird populations are under stress, such as during severely cold conditions. Predators, especially crows and related species, should be controlled and this may be best achieved by limiting the availability of near-by nesting and perching sites provided by scrub or trees.

Regular and careful maintenance or restoration of ditches, gutters and other wetland features may be necessary. They may represent the only remaining freshwater habitat within former wetland areas, 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.

If left unmanaged, silt accumulates in the bottom of the ditches, 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, periodic 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 reed dwelling species or 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. Usually, ditch spoil should be spread thinly away from ditch margins, taking care to avoid levelling out the field surface and, where possible, avoiding botanically rich grassland. Old spoil banks may need to be spread to restore suitable wetland conditions for the conservation interest. Deepening or increasing the effectiveness of surface drainage should be avoided.

Generally, ditch margins and other wetland features should be open to livestock grazing since, as on the grassland, this can control the more vigorous plant species. Light poaching of the wet margins also creates a diversity of habitat conditions that favour different wetland plants and invertebrates, and feeding opportunities for wading birds.

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. Management should allow winter flooding to occur and some shallow splash flooding into spring where breeding wetland birds are important. During these times of year ditch water levels should not generally fall more than 0.3m below mean field level and ideally should be close to field level for much of the time. Rapid or extreme changes in water level should be avoided unless they are known to be important to plant or animal communities relying on such fluctuations.

The maintenance of good water quality is essential to maintaining a healthy wetland system. Management should minimise pollution from point and diffuse sources, including discharges of domestic and industrial effluent, and run-off from agriculture and urban land. Increased levels of nutrients, for example, can cause a loss of aquatic plants and increases in algal growth. Other activities that can lead to this include the control or removal of aquatic plants, or the introduction of species such as bottom feeding coarse fish which uproot plants and disturb ditch sediments. Ditches are also 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.

An element of managed scrub, particularly on the borders of wet grassland, can be of importance to bird and invertebrate species but should be confined to small, scattered groups.

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.

Species interest

The bird 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.