

## Views About Management

### **A statement of English Nature's views about the management of Pagham Harbour 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 be 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.

### **Wet grassland with 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. 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. Agricultural operations in general should be avoided before mid-June to minimise disturbance to breeding birds or the destruction of nests. An element of managed scrub, both within and fringing a field can be of importance to birds and invertebrates, as can a surrounding hedge.

Partial winter flooding is important in maintaining suitable habitat conditions for wintering birds. A mosaic of winter flooded grassland and permanently un-flooded grassland is desirable, with both temporary and permanent pools present. The maintenance of a mosaic of shallow surface pools and un-flooded areas during the winter will provide roosting and feeding habitat for wintering wildfowl and waders. From April onwards, the area of standing surface water should be reduced to increase the area available for nesting waders and also by concentrating aquatic invertebrates in small pools to provide suitable feeding areas for their young. Some shallow areas of flooding should be maintained until late June to provide patches of bare muddy ground on which the birds and their young can feed as raised sward height makes feeding on the drier areas more difficult. The birds using these features 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 at times when bird populations are under stress, such as severely cold conditions. Predators, especially crows and related species, should be controlled and this may be best achieved by limiting their nesting sites.

Careful maintenance of existing ditches and drains is usually acceptable practice, but abandonment or deepening of ditches can be harmful.

### **Vegetated shingle**

Shingle is defined as sediment with particle sizes from 2-200mm. Shingle beaches form where sediment is first deposited on the shore by wave action. These deposits can then build up into more stable spits, bars or forelands. The types of vegetation that occur on shingle depend on the stability and structure of the shingle itself, but all must be able to cope with the unique physical and hydrological conditions typical of this habitat. This results in some communities being unique to shingle; including unusual moss- and lichen-rich communities that are of great conservation value. Shingle structures also provide important habitats for invertebrates and breeding birds.

A key management requirement is to avoid or minimise surface disturbance, especially in the more open communities. Many of the vegetation types and species associated with shingle are fragile and vulnerable to damage from trampling. This breaks up the fine humus that develops in the upper layers of the shingle that is vital for the plants to survive. Where recreational pressures are significant enough to result in the loss of vegetation cover, or prevent its recovery, it may be necessary to take steps to manage access. Disturbance of areas important for breeding birds should be minimised during the breeding season. The shingle species are also sensitive to nutrient enrichment and encroachment from invasive non-shingle species. Where this is a problem it may be necessary to undertake measures to address this.

Where there is more closed vegetation cover, light grazing, by rabbits for example, may be all that is needed to prevent scrub encroachment on areas of grassland and heath. However, if there is a tradition of sheep grazing; it may be beneficial to continue this practice at a low intensity. In some cases grazing is not necessary, because of the low rates of plant growth on shingle structures, and can even be damaging, due to the fragility of shingle habitats. The introduction of grazing where it has not been traditionally practiced would not be beneficial.

### **Coastal lagoons**

Coastal lagoons are saline water bodies separated from the sea by a barrier (e.g. sand, shingle or rock sill). A small number are separated by tidal narrows which restrict the flow of water into and out of the lagoon. This separation from the sea makes them unique among coastal habitats and means that saline lagoons are either tideless, or where inlets occur, the tide has only a restricted effect on the lagoon. They retain part of their water-body at low tide, and this water may be either saline or brackish. They often support unusual assemblages of marine, estuarine and aquatic plants and animals, including lagoonal specialist species.

Any management needs to be carefully tailored to the needs of each individual lagoon and should be based on an understanding of the natural features of importance and the external factors affecting the lagoon. Indeed, where a lagoon is in a good and stable condition, active management is unlikely to be necessary. Maintaining salinity and water depths can be a key management priority, particularly where some lagoons become increasingly separated from the sea as a result of natural coastal processes - the balance between freshwater (e.g. from rainfall, streams or artificial outputs) and

saline (i.e. sea water) inputs may change as a result. It may be necessary to actively manage freshwater and seawater input to favour certain species or communities. Whilst freshwater input is not essential to the conservation of lagoons, some connectivity with seawater is.

The water depth is also critical to many of the lagoonal specialist species with a depth between 0.5 and 1m being desirable. Some deeper water refuges are also beneficial. Siltation from surrounding land run-off may need to be addressed.

Water quality, and any direct and/or diffuse inputs from the surrounding land, can have a profound effect upon the productivity of lagoons and well-being of specialist species. Saline lagoons can show extreme reactions to a build up of some types of nutrients and therefore it may be necessary to actively manage inputs, especially where in close proximity to farmland.

In some cases, it may be desirable to allow vegetation to encroach into the lagoon to increase the diversity of habitats present, particularly for some breeding and migratory bird species. However vegetation should not be allowed to encroach to such an extent that it significantly reduces the areas of open water and shallow water, thus reducing the variety of habitats available to specialist species within the lagoon itself.

Islands in saline lagoons can be important for breeding birds and some management of the vegetation on these islands may be necessary to provide the best conditions for breeding birds. Two typical methods of vegetation control include flooding and hand clearance.

### **Heronry**

Grey Herons nest in groups, known as heronries, high in the crowns of mature trees. Where nesting Grey Herons are present, management should aim to maintain areas of woodland with a high proportion of tall mature trees (typically between 15-30m high) to provide suitable roosting and nesting sites for the species. Grey Herons require quiet and undisturbed places in which to nest, usually preferring a commanding position over the surrounding open landscape. Nesting Grey Herons are vulnerable to human disturbance and the disturbance of woodland in the immediate vicinity of nesting birds should be kept to a minimum during the breeding season mid-March to July. Recreational use of the woodland should be discouraged, whilst shooting for game should be avoided completely in areas where Grey Herons are nesting. Grey Herons forage over extensive areas including shallow water, marshes, lagoons, estuaries, reservoirs, ditches, rivers, ponds, lakes and canals. Any open water or wetland habitats present on site should be retained to maintain local foraging habitat.

### **Active Process Sites (IA)**

Geomorphological sites where the natural processes that produced the important scientific features are still occurring are referred to as 'active process sites'. The primary management principle is to avoid interfering with these natural processes and the features they produce.

Any development or activity that restricts natural processes is likely to damage the interest features of the site. Direct damage can be caused by activities such as the

construction of structures and defences, or the removal of material such as sand and gravel.

Developments do not necessarily have to take place within the boundary of a site to cause damage. Natural systems can be complex. For example, development in one area can disrupt active processes in a site many miles away by altering rates of erosion. As processes within a site can be affected by developments beyond the site boundary, it is important to take a broad and integrated approach to the management of active process sites.

**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.