

Views About Management

A statement of English Nature's views about the management of South Dorset Coast 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

Active Process Sites (IA sites)

Geological 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. In some instances, sites are likely to be damaged by tree planting which can restrict natural processes by stabilising the soil. Changes in drainage patterns can also damage active process sites.

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.

In general, active management of these sites is often only necessary if human activities have affected the natural processes. For example, management may involve removal of man-made barriers which restrict the natural movement of geological features, clearance of rubbish or planted trees.

Collecting of geological specimens may be acceptable if undertaken in a responsible manner. However, there are some sites where the geological interest is very finite in nature and over-collecting can result in damage or destruction of the interest. Collecting of specimens requires very careful management to ensure that the geological resource is conserved. Where there is any doubt, a precautionary approach should be adopted before removing or allowing any material to be removed.

Coastal Cliffs and Foreshore (EC and EF sites)

Coastal geological sites form a very important part of England's geological resource for two reasons. Firstly, in many areas the only natural rock exposures are on the coast. Secondly, coastal cliffs often provide much better exposure of geological features than comparable inland sites.

The key management principle for coastal geological sites is to maintain exposure of the geological interest by allowing natural processes to proceed freely. Inappropriate construction of coastal defences can completely conceal rock exposures and result in the effective loss of the geological interest. In addition, any development which prevents or slows natural erosion can have a damaging effect. Erosion is necessary to maintain fresh geological outcrops. Reducing the rate of erosion usually results in rock exposures becoming obscured by vegetation and rock debris.

Coastal processes are complex and no section of coastline exists in isolation. This means that coastal protection has indirect effects on other parts of the coast. Developments do not necessarily have to take place within the boundary of a site to cause damage. For example, cliff protection in one area may starve other beaches of sediment, accelerating cliff retreat elsewhere. 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 coastal management. This can provide significant benefits to the conservation of coastal geological sites.

Active management of coastal geological sites is often only necessary when human activity has interfered with natural rates of erosion. Clearance of vegetation or rock debris may be necessary to re-expose geological features where they have become obscured.

Collecting of geological specimens may be acceptable if undertaken in a responsible manner. However, there are some sites where the geological interest is very finite in nature and over-collecting can result in damage or destruction of the interest. Collecting of specimens requires very careful management to ensure that the geological resource is conserved.

Certain activities can cause direct damage to geological sites located on the foreshore and management should aim to avoid or, if necessary, minimise any harmful effects.

Such activities include dredging, construction of pipes, heavy machinery crossing the geological features and, in some instances, the introduction of large quantities of beach feed material.

Disused quarries, pits and cuttings (ED sites)

Disused quarries and road and rail cuttings form a very important part of the geological resource of England for two reasons. Firstly, many of these sites are in areas where natural geological exposures are rare or absent. Secondly, these sites often provide much better exposure of geological features than comparable natural exposures, as they reveal vertical rock sections not visible in natural outcrops.

Most disused quarries need active management to maintain exposure of the important geological features. This is because erosion rates are usually too low to ensure that fresh geological exposures are maintained naturally. Management usually involves periodic clearance of vegetation and rock debris. Vegetation growth is a particular problem for geological conservation in many inland disused quarries. It may not be practical or entirely necessary to maintain full exposure of the geological features on a site. Site management will often involve defining specific areas that need to be kept clear of vegetation.

The main threats to the conservation of disused quarries, pits and cuttings are landfill and developments which obscure the geological features. Such developments should be avoided where possible. However, where authorised landfill or development is planned, it may be possible to maintain a conservation face on the site. Similarly, restoration plans for quarries that have closed in recent years may also include the maintenance of a conservation face. In such cases, the conservation face should be maintained clear of vegetation and build-up of rock debris.

Collecting of geological specimens may be acceptable if undertaken in a responsible manner. However, there are some sites where the geological interest is very finite in nature and over-collecting can result in damage or destruction of the interest.

Similar principles apply to road and rail cuttings. Management of vegetation is often required to maintain the geological exposures. Any development or activity that leads to concealment of the interest features is likely to damage the site.

Supralittoral rock

Rocky coasts are found where geological exposures occur at the shore which can be relatively resistant to weathering. These exposures often form sea cliffs and other steeply inclined shorelines, sometimes associated with shore platforms that shelve gradually seaward. Supralittoral rock refers to exposures that occur above the normal high tide level, but are still influenced by wave splash and exposure to sea spray. The structure and composition of the rock influences the species and plant communities that can develop. These also vary depending on exposure, steepness and aspect. Rocky coasts are important to many animal species – they provide haul out areas for seals at lower levels and breeding locations for sea birds. Many invertebrate species, both marine and terrestrial, are also associated with rocky coasts.

Maintenance of high quality habitat is essential to maintain important plant and animal communities that depend upon these rocky habitats. Rocky coasts are relatively natural habitats dominated by tidal processes and the need for active management of these habitats is usually minimal. Where there are cliff top habitats present, such as grassland or heathland, these can benefit from light grazing to maintain an open sward and continuity with the vegetation on slopes or ledges. Scrub control may be necessary on some sites to maintain the diversity of habitats for which the site was notified.

The key management principle for rocky coasts is to allow dynamic processes to proceed freely. Coastal processes are complex and no section of coastline exists in isolation - processes within a site can be affected by developments beyond the site boundary so it is important to take a broad and integrated approach to coastal management.

Maritime slope and cliffs, with flush and spring fen

Some maritime cliffs and slopes are formed through the exposure of weak rock types (e.g. shale, sandstone and chalk), or unconsolidated superficial deposits (e.g. glacial till). They range from steep, rapidly eroding cliffs supporting pioneer species only, to less steep slopes and landslips supporting a wide range of vegetation, ranging from pioneer communities on freshly exposed substrate, through to grassland, heathland, scrub and even woodland where there has been limited recent movement. The open habitats can be particularly important for maritime plant species where there is exposure to salt spray and wind. Soft cliffs and slopes can support a rich assemblage of invertebrate species, including many rare species that are confined to this habitat. Some cliffs, primarily steep chalk and limestone, are important for seabird colonies, and some substrates may be used by species such as sand martins, which can burrow into soft sandy material.

The key management principle for cliffs and slopes is to allow natural geomorphological coastal processes, such as cliff recession, slumping and landslips, to proceed freely. Although the cliff may erode, colonisation and succession ensures that vegetation communities can adjust to changing cliff morphology. Active geomorphological and coastal processes are essential for the constant renewal of geological exposures and for maintaining the range of habitats and associated species that reflect the different stages of cliff formation and succession. Erosion also provides a source of beach sediment and hence helps to maintain a variety of other coastal landforms.

Groundwater sometimes breaks out on the surface of cliffs, either as gentle seepages, which give rise to flushes, or through greater flows that are evident as springs. This water may collect to form wetlands and pools, especially within depressions on landslips. The plants and animals that occur in and around these habitats are dependent on the water chemistry and flow rate. Reed, rushes and other fen plants are common and often predominate, with open areas supporting mosses, liverworts and algae mats, and water seeping over bare cliff exposures. This microtopography of wet ground features often supports important invertebrate species and assemblages.

Where cliff flush and spring fen habitats occur, a combination of both natural factors, such as erosion and exposure to wind, and grazing by naturally occurring animals or livestock can be important in conserving their interest. However, where there has not been a history of livestock grazing, on exposed sites or where there are active geomorphological processes, the habitats usually benefit from minimum intervention and are often best left undisturbed to limit damage to their fragile environment.

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. Groundwater is often susceptible to contamination by agricultural fertilisers, or by pollution, such as from urban development.

Drainage schemes should not intercept the source of groundwater to springs or flushes, or reduce the area of surface they irrigate.

A combination of natural factors and management such as grazing can also be important in conserving the interest of maritime grassland and heath on the slopes or cliff tops. Together these factors maintain the characteristic open nature of the habitats. They support the greatest diversity of plants and animals (including a diverse invertebrate fauna and a number of characteristic bird species) where management maintains an open vegetation and promotes a varied structure of uneven-aged stands of native grasses, heathers and other plants.

Changes in agricultural practices have led to the abandonment of grazing in many situations and subsequently scrub encroachment can occur, especially where exposure is less extreme. Where grazing is still practised, it should continue. By feeding selectively in different areas and on different plants, free-roaming livestock help to maintain variation in the vegetation composition and structure. They can also suppress scrub encroachment and provide some light poaching to create small pockets of bare peat and sandy ground that are of benefit to a variety of specialised plants, invertebrates and reptiles. The precise timing and intensity of grazing will vary between sites according to local conditions and requirements, such as the type or availability of stock, and the practicalities of grazing on often inaccessible areas of cliffs.

Where grazing has lapsed, reintroduction should be given careful consideration. However, where there has not been a history of grazing, on exposed sites and where there is cliff recession the maritime grasslands and heathland can be sustained as part of a successional cycle. Where grazing-sensitive species are present, grazing should not be introduced.

The cliff top communities of vegetated maritime cliffs and slopes often form part of (or are adjacent to) land managed for agricultural purposes, which may be outside the SSSI boundary. Management of this land should take into account the indirect impact arising from the application of herbicides, pesticides and artificial fertilisers. Cliff-top vegetation can also be destroyed where it is squeezed between a receding cliff face and cultivated land, therefore the management of adjacent land should seek to limit this where possible.

Chalk and limestone grassland

In order to maintain a species-rich sward and its associated insects and other invertebrates, chalk and limestone grasslands require active management. Without management these grasslands rapidly become dominated by stands of rank grasses, such as Tor-grass. These grasses, together with the build up of dead plant matter, suppress less vigorous species and lower the diversity of the site. Eventually, the site will scrub over. Traditionally, management is achieved by grazing. On the Purbeck grasslands cattle are the preferred stock, being able to control Tor-grass and other rank vegetation. Cattle also tend to produce a rather uneven, structurally diverse sward. However, ponies can be used if necessary, or even hill sheep in conjunction with cattle. The precise timing will vary both between and within sites, according to local conditions and requirements. These may include stock type or the needs of particular plants or animals; certain invertebrates, for example, can benefit from the presence of taller vegetation. However, grazing should generally aim to keep a relatively open sward without causing excessive poaching. Light trampling can be beneficial by breaking down leaf litter and providing bare patches for seed germination and some invertebrates. An element of managed scrub, both within and fringing the grassland can be of great importance to certain birds and invertebrates, but excessive scrub should be controlled. Rotational cutting should maintain patches of scrub at different stages of growth ensuring areas of young and middle-stage growth are maintained. Scattered, irregular scrub is more beneficial than large homogenous blocks. No other management should be routinely required.

Lowland acid grassland and chalk heath

Locally chalk grassland can merge into acid grassland and chalk heath. Acidic and generally free-draining soils with very low nutrient levels are key requirements but their maintenance also depends on active management. If neglected, these swards become dominated by tall, vigorous grasses or bracken which, together with an associated build up of dead plant matter, suppress less vigorous species and reduce the botanical richness of the site. Eventually the sward reverts to scrub and even woodland.

Traditionally, management has consisted of stock grazing and low intensity grazing remains the most appropriate management tool. By feeding selectively in different areas and on different plants, free-roaming livestock help to maintain variation in the vegetation composition and structure. They can also suppress scrub encroachment and provide some light poaching to create small pockets of bare peat and sandy ground that are of benefit to a variety of specialised plants, invertebrates and reptiles. Sheep, cattle or hardy ponies can be used. An appropriate stocking rate should take into account local conditions and the timing and length of grazing, but an off-take of between 30-40% of the current growth increment is desirable. Care must be taken to avoid damage to the heather by trampling. Rabbit grazing on acid grassland, though difficult to control, can also be a useful management tool in some situations.

Additional management is likely to be required to control any dense bracken invasion and to remove gorse and other scrub and tree encroachment. This may be achieved either by mechanical control or manual cutting, and the careful application of a suitable herbicide where necessary.

Hay meadow and neutral pasture

These grasslands inland from the maritime cliffs and slopes also require active management if they are to retain their conservation interest. Traditional methods of management have produced a mixture of flower-rich meadows and pastures that support a rich variety of plants, birds, invertebrates and other animals. The management may need to vary between grasslands depending on local conditions and conservation requirements. Generally, in order to maintain a species-rich sward, each year's growth of vegetation must be removed. Otherwise the sward becomes progressively dominated by tall and vigorous grasses which, together with an associated build up of dead plant matter, suppress less vigorous species and reduce the botanical diversity of the site. In other situations management may need to produce an open but structurally diverse sward containing an uneven patchwork of short and long vegetation structure to allow a range of different plants and animals to flourish.

The above objectives are achieved by either grazing the sward as pasture or cutting it for hay. Generally fields with a history of management as pasture should continue to be managed as pasture. The same applies to fields managed as hay. Switching from one form of management to another can have significant effects on the conservation interest.

In neutral hay meadows, grassland management is traditionally achieved by closing the fields to stock in the autumn and cutting the resultant growth as hay. The cut is usually done in early July, but the precise timing depends on local factors, including past management and current 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. This 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 and the need to encourage a vegetation structure favoured by the range of conservation interests, such as plants and butterflies. Grazing should aim to keep a relatively open sward without causing excessive poaching. Cattle are often the preferred stock on the wetter pastures, being relatively tolerant of wet conditions and able to control tall grasses and rank vegetation. Cattle also have sufficient weight to break down leaf litter and grass tussocks but do not graze too tightly, which would prevent establishment of an uneven sward structure. However, ponies can be used if necessary, but sheep are generally only suitable where a more uniform and shorter sward is required. Where a structurally diverse grassland is required, a good rule of thumb is that stocking rates should result in the sward height across the majority of a field being between 8 and 25 cm, with no attempt being made to graze the sward closely. Heavy poaching should be avoided but light trampling can be beneficial in providing areas for seed germination. On some sites considered winter burning on some of the rougher grassland or the topping of rush-dominated fields can be a useful supplement to grazing. An element of managed scrub, both within and fringing a field can be of importance to birds and invertebrates, as can a surrounding hedge.

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

For damper pastures, regular and careful maintenance of surface drainage including ditches and drains can be essential to prevent adverse changes in the plant species composition of the sward. Deepening of surface drainage should be avoided.

Inland flush and spring fen

Inland on some parts of this site, especially on the neutral grasslands, groundwater breaks out on the surface, either as gentle seepages, which give rise to flushes, or through greater flows that are evident as springs. The plants and animals that occur in and around these habitats are dependent on the water chemistry and flow rate. Mosses, liverworts, sedges and rushes are common and often predominate, whilst several species of orchid are also associated with these communities.

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. Groundwater is often susceptible to contamination by agricultural fertilisers, or by pollution leaking from landfill sites

Grazing is often required to keep the vegetation short and open around springs and flushes. If left unmanaged the sward becomes dominated by tall, vigorous grasses and rushes which, together with an associated build up of dead plant matter and the encroachment of scrub, suppress less vigorous species, thus lowering the botanical richness of the sward. Rotational cutting or clearance of scrub may be required. Cattle are often the preferred stock, being relatively tolerant of wet conditions and able to control tall grasses and rank vegetation. 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. Feeding of stock should take place well away from the springs (and any other sensitive habitat), and the location of structures such as animal shelters should not encourage the animals to gather in the area. This is to ensure the springs and flushes do not become enriched by nutrients from animal food or dung, or even from carcasses. 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 not intercept the source of groundwater to springs or flushes, or reduce the area of surface they irrigate.

Scrub

Scrub habitats are low-growing communities where the main woody components are bushes or small trees, such as hawthorn, rowan and juniper. They can support a wide variety of species and ecological communities. In particular, the transitional zone between scrub and other habitats can be important for wildlife, especially birds and invertebrates.

At exposed coastal sites, on slopes or cliff tops, a mosaic of structurally diverse scrub and other maritime habitats can be maintained by a combination of natural factors, such as erosion and exposure to salt-spray and wind, and grazing. In these situations it is important to allow the natural processes of cliff erosion and collapse to proceed freely. Often, and especially in sheltered situations, scrub is a transitional stage that will develop into woodland if left unmanaged. Here encouraging structural diversity and a mosaic of age classes within areas of scrub is important in maintaining the diversity of species. For example, hawthorn scrub supports the greatest variety of bird and insect species in the early and middle stages of growth.

Scrub can be managed using rotational cutting, which should aim to maintain a mosaic of patches at different stages of growth, ranging from freshly cut to old closed canopy stands. Open spaces, either temporary gaps created by cutting or more permanent areas such as rides and glades, benefit other groups of invertebrates such as butterflies. They should be of sufficient size to ensure that sunny conditions prevail for most of the day. Rides and glades may require cutting to keep them open and a diverse edge structure is important for most species of invertebrates. Scrub can also be cut in small patches to create an intimate mixture of scrub and grassland.

Grazing is another method for managing scrub and on some sites may be a more suitable management tool than cutting. By its nature, grazing can help to create a patchy mosaic of scrub and other habitats. As with cutting, it can also help to maintain a range of age classes. However, stock levels do need to be carefully controlled. If grazing pressure is too high the structure of the scrub vegetation may become impoverished. Also, the scrub may not be able to regenerate naturally, leading to a loss of cover over time. Where the objective is to increase the area of scrub an initial period of fencing to control grazing may be required.

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.

Parts of a wood, and especially woodland developing on landslips, 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.

Lichens on trees

The key management principal for the management of lichens on trees in parkland and woodland is to ensure that there is continuity of substrate i.e. there is an age range of trees to ensure opportunities of succession as the trees age. Veteran trees may require pollarding at intervals to extend their life span. Optimal light levels will depend on the lichen communities concerned, with those on parkland and wayside trees generally requiring higher light levels than those in woodland. There may be a need for scrub control, particularly where holly and rhododendron are present, and this can be achieved either by grazing/browsing or manual cutting. Climbing plants, particularly ivy, are a strong direct threat and should be removed. There should be no application of slurry or fertilisers in the vicinity of the trees because lichens are very sensitive to nutrient enrichment.

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. The use of persistent veterinary products on livestock, or other fertilisers, including manures, can also be detrimental on many of the habitats and should be avoided where possible.

The habitats are also susceptible to invasive introduced species, including plants such as *Rhododendron* and *Cotoneaster*, and, in wet situations, parrot's feather, Australian swamp stoncrop and Himalayan balsam. Such species should be controlled and, where practical, eliminated from the site. 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.