

# **PENARTH COAST SITE OF SPECIAL SCIENTIFIC INTEREST**



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## **YOUR SPECIAL SITE AND ITS FUTURE**

‘Your Special Site and its Future’ is part of our commitment to improve the way we work with Site of Special Scientific Interest (SSSI) owners and occupiers. In it, we explain what is special about the wildlife on your site, and what care is needed to look after its wildlife into the future.

All SSSIs are considered to be of national importance and we recognise the crucial role that owners and occupiers play in their management and protection. We need you to share your views and knowledge of this site with us, to help us safeguard it.

We hope that you will find ‘Your Special Site and its Future’ interesting and helpful. Please contact us if there is anything about the site and its management that you would like to discuss.

## What is ‘special’ about Penarth Coast SSSI?

Penarth Coast SSSI has both geological and biological features.

There are two **geological features** of the SSSI. Separate lengths of cliff and foreshore represent two different geological periods. The rocks tell us about the environment between about 210 and 180 million years ago. They contain a variety of non-marine and marine fossils (such as ammonites), and the combination of these fossils and the characteristics of the rock layers enable geologists to reconstruct the changing environments of the latest Triassic and early Jurassic periods, as land became ocean.

To the West of Lavernock Point are two cliff-top fields, which support a **mixture of habitats in close association**. They support scrub, secondary woodland and species-rich grassland within a relatively small area. Immediately adjacent, on the south-facing cliff face, are some areas of softer rock and bare soil, This is habitat for specialist invertebrates such as certain bees and wasps (aculeates) which find the nectar they need in the flowers of the cliff-top vegetation.

**Species-rich neutral grassland** is very rich in plant life. The type found here is typical of dry soils with some lime-enrichment, with plants such as rockrose, salad burnet, lady’s bedstraw and glaucous sedge.

Some of the grassland plants that occur here are not often found growing together. While only calcium-loving species are common on the drier ground near the cliff, some of these also occur in unusual association with pepper saxifrage, dyer’s greenweed, purple moor-grass and flea sedge in the damper parts of the meadows.

The scrub includes a range of shrubs, such as dogwood and wild privet, which are typical of calcareous soils in South Wales. Other plants characteristic of the Vale of Glamorgan coast include stinking iris, which finds the conditions it needs under the bushes, and wild madder, which sprawls over them.

The scrub at Lavernock Point provides a landfall point for migratory birds as well as breeding habitat for a range of passerines. The flowering plants and shrubs provide nectar sources for insects, including those that use the soft cliff habitat. Butterflies have been recorded here over many years and there is a long species list.

On the foreshore, the **intertidal communities** include soft piddock-bored substata, rock pools, tide-swept algae and reefs of honeycomb worms. These marine worms build their tubes from sand surrounding the boulders and rocky platforms.

## What do we want Penarth Coast SSSI to look like?

The following is a description of how we would like to see the geology here:

*The rock layers are exposed sufficiently for them to be examinable, and to see how each layer relates to the layers above and below, and laterally, in the sequence. The rocks are clean and accessible in key areas along the cliffs and foreshore, and this is sustainable in the long term.*

*The cliff-top grassland and scrub supports a rich mixture of grasses and other flowering plants, which bloom in succession from spring to late summer. Many different insects and other invertebrates also find the conditions they need here.*

*Typical meadow species found in the grassland are black knapweed, bird's-foot trefoil, dyer's greenweed and ribwort plantain. These continue to grow together with a range of other herbs and grasses, which reflect the variety of ground conditions found here and make this site so unusual. Tall grasses such as cock's foot and tall fescue grow together with the smaller, more delicate heath grass, quaking grass and glaucous sedge. Devil's-bit scabious, agrimony, pepper saxifrage and saw-wort are common herbs.*

*Rockrose, wild carrot, salad burnet, ladies' bedstraw and glaucous sedge are found in the short turf near the cliff edge, where dry soil, windy conditions and rabbit grazing restrict the height of these plants.*

*The species-rich inter-tidal communities found along this stretch of coast include reefs of honeycomb worms, which form crusts on rocky platforms. The inter-tidal zone remains a dynamic environment, subject to the influence of the sea, and is mainly undisturbed by human influence.*

#### **What management is needed on Penarth Coast SSSI and why?**

In most parts of the geological site, the rocks are kept clean by wave action and salt spray. However, there may be potential for a natural build-up of shore sediments, debris and soil, with plant growth in some locations, which would cover up the geological features. This is not a problem at the time of writing (2008), but localised clearance may be necessary in the future.

In some areas of the site parts of key rock exposures are covered by man-made structures such as walls and paths and coastal defences, some of which appear disused. Some removal and/or redesign of these structures would benefit the geological interest of the site.

Although Penarth Coast SSSI is an excellent place for wildlife, it is not wholly 'natural'. It is the product of decades, or even centuries of management. It will be essential to continue management, and CCW's priority is to work with you to achieve this. We place great importance on our relationships with owners and occupiers, because without your help, it will be impossible for us to safeguard the special features on your land.

#### **What does this mean in practice?**

There are some management actions that are essential to conserve the wildlife value. Other management actions could damage the flora and fauna within a very short time. These are the ones we regard as the most important.

**Grazing or mowing** is very important, as these forms of management prevent the grassland becoming rank and a few, strong species taking over.

They allow a whole range of finer grasses and other plants to grow together and also prevent the grassland turning into scrub and woodland. Light grazing, preferably by cattle or horses, is the best way to maintain the grassland. This is because these animals will feed on the more dominant grasses, and also help to keep the vegetation down by trampling. In contrast, sheep tend to nibble the more palatable species, including many wild flowers. Eventually, under heavy sheep grazing, these flowers can completely disappear.

A combination of rabbit-grazing, wind-pruning and dry conditions keeps the turf low, but occasional mowing, and removal of the clippings will prevent litter building up. An excess litter layer, or leaving grass clippings on the ground after mowing, is likely to change the species composition of the grassland in an undesirable way. This can occur both through the return of additional nutrients to the grassland, and also by reducing space available for recruitment of new broad-leaved herbs.

The **use of modern fertilisers and other chemicals** at Penarth Coast SSSI would be very harmful to the grasslands. This is because they stimulate the growth of one or two grass species at the expense of the many different plants we are trying to encourage. Eventually, it can cause these grasses to outgrow the many species of wild flowers present.

No re-seeding of the grassland should be undertaken.

**Control of bramble and other scrub** will be needed, and may be desirable even in grazed areas to increase the area of grassland. The woodland and some scrub should be maintained to provide habitat for non-grassland plant species, and for breeding and migratory birds. The aim will be to create a mosaic of different sward heights interspersed with areas of scrub of different stages of growth, with the retention of areas of woodland.

Between the meadows lies a World War II anti-aircraft battery now listed as an Ancient Monument. Once obscured by scrub, the monument has been uncovered through scrub removal. Vegetation clearance to fulfil the requirements of Cadw needs to be balanced with the wildlife interest of the vegetation that grows on the monument.

### **Finally**

Our knowledge of wildlife is continually improving. It is possible that new issues may arise in the future, whilst other issues may disappear. This statement is written with the best information we have now (March 2008), but may have to change in the future as our understanding improves. Any information you can provide on the wildlife of your site, its management and its conservation would be much appreciated.

**If you would like to discuss any aspect of your SSSI, or have any concerns about your SSSI, please contact your local CCW office.**

**Your local office is; Countryside Council for Wales, Unit 7, Castleton Court, Fortran Road, St Mellon's, Cardiff**

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