Scottish Natural Heritage
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STRATHY COAST
Site of Special Scientific Interest

SITE MANAGEMENT STATEMENT

Site code: 1689

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Purpose

This is a public statement prepared by SNH for owners and occupiers of the SSSI. It outlines the reasons it is designated as an SSSI and provides guidance on how its special natural features should be conserved or enhanced. This Statement does not affect or form part of the statutory notification and does not remove the need to apply for consent for operations requiring consent.

We welcome your views on this statement.

This statement is available in Gaelic on request.

Natural features of Strathy Coast SSSI	**Condition of feature** (and date monitored)	**Other relevant designations**
Moine (geology)	Favourable, maintained (August 2002)	
Machair	Favourable, maintained (July 2002)	
Maritime cliff (vegetation)	Favourable, maintained (July 2002)	Strathy Point Special Area of Conservation (SAC) 'Vegetated sea cliffs' feature
Sand dune (vegetation)	Favourable, maintained (July 2002)	
Saltmarsh	Favourable, maintained (July 2002)	
Vascular plant assemblage	Favourable, maintained (June 2003)	

Description of the site

Strathy Coast SSSI extends along more than 25km of the north coast of Sutherland between Kirtomy and Melvich. This section of the coast has north, east and west facing cliffs, interrupted by sandy beaches at Armadale, Strathy and Melvich. Part of the site is also designated as Strathy Point Special Area of Conservation (SAC) for its vegetated sea cliffs.

Moine geology

The Moine rocks exposed along 1.5km of coast around Portskerra originated as sea-floor sands and muds around 1.1 billion years ago. They underwent major and complex deformation over the following 600 million years, making them among the most highly altered Moine rocks in Sutherland. Intense heating whilst the rocks were buried deep underground first 'baked' sandstone and mudstone into harder psammite and pelite,

and then caused partial melting of certain minerals in distinct layers. The resultant banded rocks, known as migmatites, are clearly visible at the site. Magma was intruded into these older Moine rocks in at least three episodes. The resulting igneous rocks were then altered by further heat and pressure. More base-rich rocks became dark amphibolites, while some granites became augen gneisses, with “eyes” of feldspar crystals surrounded by layering formed by compression. Later intrusions include granites from the 650 million year old Strath Halladale Granite Complex. Folds and shears in these granites have been dated to 450 million years ago, when the area became an over-thrust sheet now called the Swordly Nappe. These structures formed when the sections of continental crust containing modern day Scotland and England collided. Erosion eventually brought the Moine and igneous rocks of the site to the surface, where they were overlaid by Devonian sandstones around 375 million years ago. The stark juxtaposition of younger sandstones above the eroded Moine rocks is spectacularly exposed in the cliffs north of Portskerra.

By examining the patterns and relative timings of deformation, the age and inter-relationships of the Moine and igneous rocks can be established. This contributes greatly to our understanding of how processes of deformation created regional features like the Swordly Nappe, and thus how this part of Scotland was assembled by collisions of the Earth’s crust. The superb exposures within a small area make this site crucial to the study of Moine geology.

Monitoring of the Moine geology took place in 2002. There had been no significant change in the area, composition or visibility of the geological interest at Sgeir Ruadh, Portskerra since the previous survey in 1993. There had been some ‘rock work’ on the walkway in Portskerra harbour, which had involved some removal of the outcrop, but new rock exposures of the same importance were created at the same time. There was no sign of recent tipping east of the road end at the harbour and some of the larger items from the tip seemed to have been removed. This feature was found to be in favourable condition.

Machair

Machair grasslands are found inland of the sand dunes at Armadale, Strathy and Melvich. They are species-rich and occur on largely calcareous shell sand, providing a mass of colourful flowering plants in summer. Clover, birds-foot trefoil, cowslips, wild thyme, frog orchid and common self-heal are all found here.

The machair was surveyed in 2002. The vegetation at Armadale and Strathy was shorter than typical for machair sites however these areas were particularly rich in species and were good examples of machair grassland. Most of the machair plants were able to flower and set seed. Sand extraction and tipping were absent or very minor. Rabbit burrows were present, but were only causing erosion on a small part the south eastern dunes at Armadale Bay. Overall the machair was in favourable condition.

Maritime cliff (vegetation)

The cliff ledge plant communities and cliff top maritime grasslands of Strathy Coast are both varied and extensive. Plant species present include thrift, Scots lovage, wild angelica, sea mayweed and roseroot. The small islands and stacks support red fescue and thrift grassland, with common scurvygrass and Scots lovage. Where grazing

occurs, the two latter species are replaced by sea plantain. These salt-tolerant communities can develop into rich meadows with yarrow and occasionally purple oxytropis where there is some shelter. The most widespread cliff-top grassland is a green-blue sward of sedges, including the glaucous sedge and carnation sedge. Large populations of the nationally scarce Scottish primrose grow along the coast between Kirtomy and Strathy and near Portskerra. Grazing and exposure to the sea produces a short sward which this plant requires. Moving inland, the grasslands change gradually into maritime heaths. These are typically dominated by dwarf shrubs, such as heather and crowberry, and often include creeping willow, spring squill and sea plantain.

Monitoring of the maritime cliff habitat took place in 2002. There was maritime cliff habitat along the entire length of the site. Both the grass-dominated and heather-dominated areas contained many plant species that are typical of coastal vegetation in the north of Scotland, but are rare in other parts of the country. Grazing, including that by rabbits, was at a level that allowed plants to flower and set seed over the majority of the site. There was no significant damage or disturbance to the site and the maritime cliff habitat was found to be in favourable condition.

Sand dune (vegetation)
The habitats in the sandy bays are of exceptional quality and typically show a complete succession from pioneering strandline communities with sea sandwort and sea rocket, through mobile dunes with colonising species such as marram grass, to mature fixed dunes and machairs. Bird's-foot trefoil, harebell and wild thyme are commonly present. There are also several less common species, including field gentian, frog orchid, common twayblade and the nationally rare purple oxytropis.

The sand dune habitats were monitored in 2002. The sand dunes at Armadale, Strathy and Melvich were undergoing a phase of natural erosion. There were no significant changes in the area or species composition of the sand dune vegetation. Invasive species were generally absent. Grazing (including that by rabbits) was at a level that allowed plants to flower and set seed. There was relatively little strand vegetation between the edge of the dunes and the high water mark, and relatively few flowering heads on the marram grass in the sand dunes. These features are subject to natural variation, so the levels recorded are not a cause for concern at present. Overall the sand dunes were found to be in favourable condition.

Saltmarsh
A saltmarsh has developed in the sheltered intertidal area behind Melvich beach where silty and gravely muds have accumulated. This is unusually extensive for the north coast and has a typical range of species, including saltmarsh rush and sea-milkwort.

Monitoring of the saltmarsh took place in 2002. There had been no change in the pattern of zonation, physical structure or plant species in the saltmarsh. Grazing pressure, including that by rabbits, was at a level that allowed the typical saltmarsh plants to flower and set seed. There was little trampling damage. Overall the saltmarsh was in favourable condition.

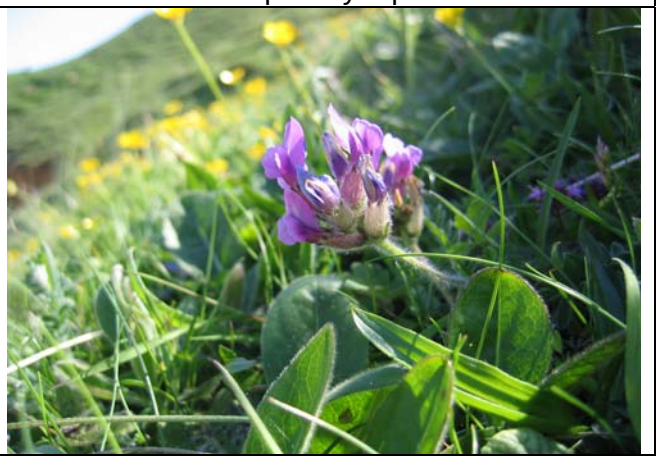
Vascular plant assemblage
Five nationally rare or scarce plants are known to grow on this site: Scottish primrose, purple oxytropis and three species of eyebright (*Euphrasia rotundifolia, E. foulaensis*

and *E. marshallii*). These plants grow in the sand dune, machair and maritime cliff habitats described above. Scottish primrose grows in Sutherland, Caithness and Orkney and nowhere else in the world. Populations of many thousands are found between Kirtomy and Strathy and the area around Strathy Point lighthouse is a good area to see this species. Purple oxytropis grows in clumps in grassland where there is light grazing and on the edges of cliffs. The three species of eyebright are hard to separate from one another and grow in areas of short grassland.

These species were monitored in June 2003. All five species were located and all met the targets for the size of populations and number of localities. Seed heads and/or young plants were seen in all species suggesting successful regeneration is occurring. During the 2003 monitoring, concerns were raised about overgrazing affecting two Scottish primrose sites. A subsequent visit in 2005 found the level of grazing to be appropriate for this species, suggesting any negative impact of grazing was not long-term. Overall the vascular plant assemblage was found to be in favourable condition.

Other interests

Strathy Coast also supports a variety of breeding seabirds including puffin, fulmar, kittiwake, black guillemot and common and arctic terns. Ringed plover and oystercatcher also breed in the rocky inlets, whilst peregrine, buzzard and raven breed on the cliffs.

Thrift on Strathy Point	Purple oxytropis
	

Past and present management

Most of Strathy Coast SSSI is not intensively managed due to the steep and dangerous nature of the slopes and cliffs. The cliff top vegetation has been, and continues to be, used to graze livestock. The current level of grazing (including that by rabbits) has allowed the present vegetation to develop. Occasional stock feeding of hay occurs on drier ground.

Other land management activities include the maintenance and renewal of existing fences, drains and ditches and the occasional construction of new fences along the coastline. Vehicles are used on the site for agricultural purposes, though care is taken to avoid damaging sensitive areas. Sand is extracted by hand on a small scale and for crofting use at Armadale and Melvich bays. The collection of seaweed and whelks takes place along the shore, though this is only for domestic use. Invasive species are controlled by cutting or specific herbicides in the case of bracken or burning in the case

of gorse. Some rotational muirburn also takes place in accordance with The Muirburn Code of Practice.

The Halladale River is managed for fishing. Young salmon are released into the river and adults are netted and tagged at the river mouth for research purposes. The riverbanks are managed to prevent flooding and improve the condition and accessibility of fishing pools.

The Strathy Coast area is a popular area for locals and tourists to visit. Grassy paths from the car parks outwith the SSSI at Armadale, Strathy and Melvich bays provide access to the beaches which have recently become popular with surfers. Facilities for visitors include a toilet with wheelchair access near Strathy graveyard. There are footbridges across the Halladale River near Bighouse and across the two burns that flow through Armadale beach, improving visitor access. It is also popular to walk along the road to Strathy Point from the car park near Totegan. The Highland Council ranger service conducts a variety of guided walks on this site.

Objectives for Management (and key factors influencing the condition of natural features)

We wish to work with land managers to protect the site and to maintain and where necessary enhance its features of special interest. SNH aims carry out site survey, monitoring and research as appropriate to increase our knowledge and understanding of the site and its natural features.

The EU Habitats and Birds Directives oblige Government to avoid, in SACs and SPAs, the deterioration of natural habitats and the habitats of species, as well as disturbance of the species for which the areas have been designated, where such disturbance could be significant in relation to the objectives of these Directives. The objectives below have been assessed against these requirements. All authorities proposing to carry out or permit to be carried out operations likely to have a significant effect on the European interests of this SSSI must assess those operations against the relevant Natura conservation objectives (which are listed on our website through the SNHi - SiteLink facility). The list of Operations Requiring Consent, and the discussions on land management involved in the issuing of formal consents are intended to minimise the threat of any damage to the natural features.

1. To maintain the condition, distribution and extent of the coastal habitats, including the maritime cliff, vascular plants, machair, sand dune plant communities and saltmarsh.

The level of grazing is a key factor maintaining the plant diversity in many of the notified habitats and it is crucial to the condition of the vascular plant assemblage. Stocking should continue at a level at which there is no obvious damage to the vegetation from over-grazing or trampling, allowing plants to flower and set seed. Complete removal of grazing would be very damaging to the Scottish primrose populations. This species cannot survive in long grassland. Damage to the dunes systems can be caused by excessive trampling or overgrazing. If human trampling is destabilising the dunes, then improved visitor information may be needed. Ploughing, re-seeding or fertilisation of the ground would damage the rare plants on Strathy Coast SSSI, so these activities should be avoided.

2. To maintain the rock exposure and access to key geological outcrops on the site.

The rocks within the site should continue to be protected from unauthorised tipping, obstructions that would reduce the visibility of the rocks, and unconsented quarrying.

Other factors affecting the natural features of the site

- Off-road vehicles: Frequent use of off-road vehicles such as trail bikes or quad bikes in the sand dunes and machair would damage the vegetation and has been a problem in the recent past. This could lead to the formation of large blowouts in the dunes and erosion in the machair that would be very difficult to control. Any sightings of recreational off road vehicle use should be immediately reported to the police.

- Trampling by visitors: Large numbers of visitors walking through the dunes to the beaches could trample the vegetation, leading to erosion. Provision of paths, such as that built recently by the Allt Beag Armadale Trust, will help to avoid this potential problem.

Date last reviewed: 16 September 2010