



Scottish Natural Heritage
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BROUBSTER LEANS **Site of Special Scientific Interest**

SITE MANAGEMENT STATEMENT

Site code: 265

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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 Broubster Leans SSSI	Condition of feature (date monitored)	Other relevant designations
Hydromorphological mire range	Favourable, maintained (August 2007)	Broubster Leans Special Area of Conservation (SAC) "Very wet mires often identified by an unstable `quaking` surface"
Breeding bird assemblage	Favourable, maintained (June 2007)	

Features of overlapping Natura sites that are not notified as SSSI natural features	Condition of feature (date monitored)	Designation
Greenland white-fronted goose	Favourable, maintained (April 2001)	Caithness Lochs Special Protection Area (SPA) and Ramsar site
Greylag goose	Favourable, maintained (April 2001)	Caithness Lochs SPA and Ramsar site
Whooper swan	Favourable, maintained (April 2001)	Caithness Lochs SPA and Ramsar site

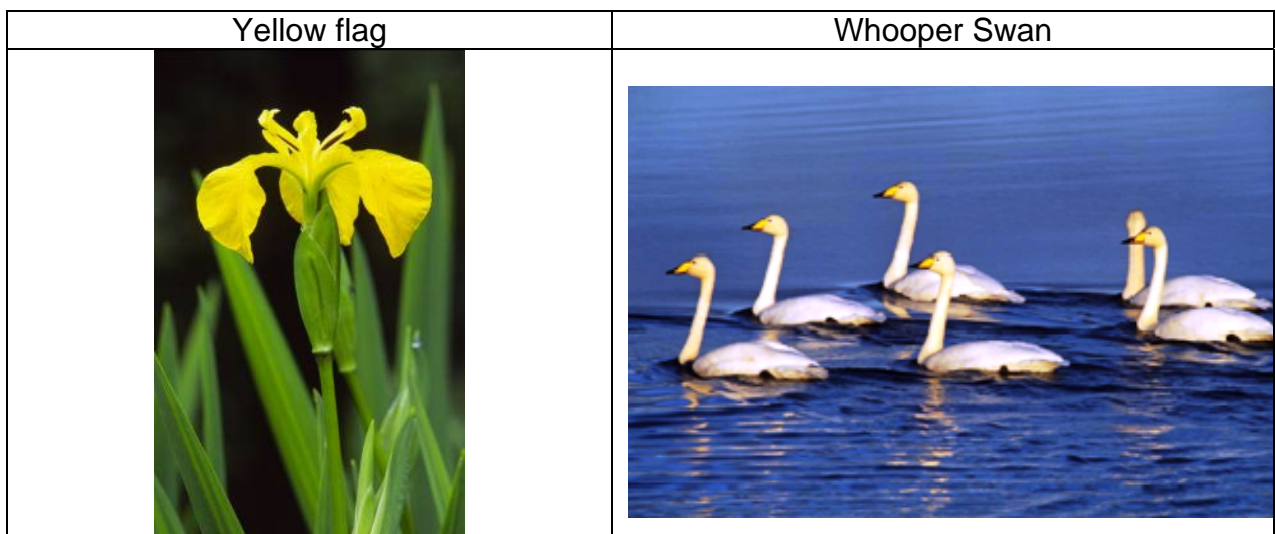
Description of the site

Broubster Leans Site of Special Scientific Interest (SSSI) is a mosaic of peatland, swamp, fen and open water habitats on the flood plain and old channels of the River Forss 9km southwest of Thurso, Caithness. This area is nationally important for the range of birds that breed on this site, and of international importance for the wetland habitats and wintering geese and whooper swan.

Hydromorphological mire range

Broubster Leans SSSI is of national importance for its range of wetland and open water habitats. Wetland vegetation occurs in extensive and continuous stands across the site. The area is extremely wet and fen species such as water sedge, marsh cinquefoil, water horsetail, marsh bedstraw, yellow flag and marsh marigold grow as a floating mat on the water surface. The transition from fen to swamp communities is characterised by the presence of branched bur-reed. The swamp vegetation has developed mainly on the margins of lochs and old watercourses and is dominated by water horsetail and bog bean. Drier areas of the site support marshy grassland, characterised by soft rush and sedges.

Monitoring of the mire at Broubster was also carried out in summer 2007. The extent of the fen had been maintained since previous monitoring visits. The fen contained a mosaic of vegetation of different heights, creating a diversity of habitats. The characteristic plant species associated with fens, such as water sedge, bottle sedge, soft rush and water horsetail were abundant at the site. The ground was wet with no obvious changes to the hydrology of the site. Overall the hydrological mire range was found to be in favourable condition.



Breeding bird assemblage

A variety of bird species that breed on lowland wetland sites are found on this site. Monitoring undertaken in the summer of 2007 recorded breeding curlew, oystercatcher, teal, snipe, common sandpiper, red-breasted merganser and tufted duck. There are records of nationally rare birds such as spotted crake and wood sandpiper breeding here in the past. The diversity of bird species breeding on the site, and the continued suitability of the open water and fen habitats for these species, led to the breeding bird assemblage being assessed as in favourable condition.

Greenland white-fronted goose, greylag goose and whooper swan

Broubster Leans is also an internationally important site for overwintering wildfowl. Around half of the Caithness population of approximately 200 Greenland white-fronted geese roost here regularly, as well as up to around 2000 greylag geese and 40-50 whooper swan.

Other interests

An extensive area of blanket bog is present on the east of the site. This is largely dominated by heather, cross-leaved heath, hare's-tail cotton sedge and deer grass. Areas of open water within Broubster Leans SSSI support the rare water beetle *Oreodytes alpinus*, which is only found in a small number of lochs in Caithness. Both hen harrier and short-eared owl forage here in winter, as well as during the breeding season. Pink-footed geese, wigeon and teal also winter here in considerable numbers.

Past and present management

Around the mid-19th century the hydrology of the site was changed to re-route the River Forss from its original meander through the centre of the SSSI. A canal was built, aided by a dry stone dyke that has now directed the flow along the eastern edge of the site. The old river course has become an extensive area of open water pools, fen and marsh that form Broubster Leans SSSI.

The wetness of the ground means that the majority of the site has no intensive form of land use. Rough grazing on the drier areas of grassland and bog at the edges of the site contribute to the diversity of lowland breeding wader habitat. Up to 2008, part of the site was managed under the Countryside Premium Scheme for water margins. This set stocking levels and timing of grazing on site to protect and enhance the natural heritage interest. SNH would encourage applications to the Scotland Rural Development Programme (SRDP) for continued conservation management of the site.

Land surrounding the site is used for low intensity agriculture, mainly stock grazing and the production of hay and silage. Several conifer plantations exist upstream of the site within the catchment of the Forss River.

In 2008 part of the SSSI was acquired by the Royal Society for the Protection of Birds (RSPB) with the aim of maintaining and enhancing the site to protect birds and other wildlife and habitats on the site. They also have a management agreement with another landowner which covers another large part of the site and is included in the new Broubster Leans RSPB Reserve. In total this reserve covers the majority of the SSSI and part of the adjacent land. Little practical management is required to maintain this site, however the RSPB are enhancing conservation management of the land on the edge and adjacent to the SSSI. They have begun by removing some of the taller rank vegetation around the southern part of the site to open up the wetland edges to improve conditions for wader chicks.

It is possible that some of the open water areas may become restricted in future due to encroachment of vegetation although this would happen slowly. The RSPB have commissioned a hydrological study of Broubster Leans, where their ecologists have surveyed the site to computer model the effects of restoration of the river. The results of the modelling will help to assess whether restoration of the original water channel would be beneficial to the SSSI.

The site is also used for recreational activities. There has been wildfowling on the site in the past at a low frequency. Recreational fishing occurs on some of the lochs within the site, again at low frequency. Broubster is considered to be one of the best ornithological sites in Caithness and many birdwatchers visit the area, normally observing it from the road to the west.

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

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

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). A 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 range of wetland habitats

Water levels and water quality play a crucial role in the condition of wetland habitats and if these are maintained, then no active management is needed for this site at present. Wetland habitats require a high water table and any increase in drainage, abstraction or other activities affecting the hydrology of the site and the wider Forss catchment should be considered carefully to ensure that the high water table is maintained. Agriculture and forestry operations within the Forss catchment should be carefully managed to prevent the input of excess chemicals, nutrients or sediment into watercourses in order to maintain the high water quality required by the fen vegetation. Most of the site is so wet that it is clearly unsuitable for vehicles. Any vehicle use should be restricted to drier parts of the site during dry periods, taking care not to break through the surface of the vegetation. Most of this site is also too wet for livestock but the drier areas at the edge of the site would benefit from light grazing that ensures that tall, rank vegetation does not overwhelm smaller plants. Stocking levels should however be low enough to allow plants to flower and set seed and to avoid poaching the ground.

2. To maintain the populations of breeding and wintering birds

This objective can be met if the habitat is maintained following the advice given in the objective above and there is no significant disturbance of the birds. Disturbance can affect both breeding and overwintering birds and any management activities on or around the site should be planned to minimise disturbance to the birds. The main period during which breeding birds are present is April to July inclusive.

Wintering geese and swans may be present in Caithness between late September and

late April. The exact dates that these birds arrive in Caithness in autumn and leave again in spring varies from year to year, depending on the weather at their breeding grounds in Iceland and Greenland, as well as the weather in Caithness. Wintering geese use Broubster Leans mainly for roosting overnight so it is important to avoid disturbance between dusk and dawn. Whooper swans can spend the whole day foraging at Broubster Leans as well as roosting here, so any activities during the day in winter should be planned to avoid disturbance to these birds.

Greylag geese are legal quarry between 1 September and 31 January (other than on Sundays or during cold-weather bans on wildfowling). However other species that roost here in winter – Greenland white-fronted goose and whooper swan – are not legal quarry. SNH discourages any shooting of greylag geese on or adjacent to this site because large numbers of birds are likely to be disturbed, including the protected Greenland white-fronted goose and whooper swan.

If wildfowling is to be carried out on the site, SNH recommends that the “British Association of Shooting and Conservation’s code of practice for sporting agents and guides offering inland goose shooting” should be followed and that any wildfowling should be carried out infrequently, with all effort made to reduce disturbance to non-quarry species.

Other factors affecting the natural features of the site

The breeding success of the geese and swans that winter on this site is likely to affect the number of birds wintering here. If the overall populations of geese and swans rise or fall, these changes in the wider population would expect to be reflected in a change in the number of birds that overwinter at Broubster.

Wildfowling outwith Broubster Leans SSSI may affect the number of greylag geese that overwinter on the site since the overall population of this species is likely to increase if fewer birds are shot and decrease if more geese are killed by wildfowling. If the overall population of greylag geese changes, the number of birds overwintering at Broubster is also likely to change.

Climate change may alter the distribution of wintering geese and swans. Warmer conditions in winter might lead to an increase in the number of birds that overwinter in Caithness rather than further south. Very cold conditions cause the water to freeze at Broubster Leans, which encourages geese and swans to seek areas of water that have not frozen for roosting and foraging, for example nearby at Loch Calder.

Date last reviewed: 15 April 2010