



Scottish Natural Heritage
Dualchas Nàdair na h-Alba
 All of nature for all of Scotland
 Nàdair air fad airson Alba air fad

BAD NA GALLAIG
 Site of Special Scientific Interest

SITE MANAGEMENT STATEMENT

Site code: 113

Main Street, Golspie, Sutherland, KW10 6TG. Tel. 01408 633602 north_highland@snh.gov.uk

New address from April 2009:

The Links, Golspie Business Park, Golspie, Sutherland, KW10 6UB. Tel 01408 634063

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 Bad na Gallaig SSSI | Feature condition (date monitored) | Other relevant designation |
|--|---|-----------------------------------|
| Blanket bog | Unfavourable, recovering (June 2006) | SAC, Ramsar |
| Breeding bird assemblage | Favourable, maintained (June 2006) | SPA, Ramsar |

See Annex 1 for a list of natural features of overlapping Natura sites that are not notified features of Bad na Gallaig SSSI.

Description of the site

Bad na Gallaig Site of Special Scientific Interest (SSSI) is located in central Sutherland between Loch Naver and Loch Loyal. This site is nationally important for peatland habitat and upland breeding birds. The headwaters of the River Naver form within this site and are part of the spawning grounds of the river's Atlantic salmon population. This salmon population is both of international conservation importance and of considerable economic value to Sutherland.

Bad na Gallaig SSSI forms part of an internationally important peatland and is one of the most extensive areas of blanket bog in the world. The peatlands of Sutherland and Caithness also support internationally important populations of upland birds and otters. These species naturally occur at low densities and require large areas of undisturbed land. The body of peat under the blanket bog is also a large store of carbon. Keeping this carbon locked up in the peat and continuing land management that maintains the peat-forming process makes an important contribution to reducing Scotland's carbon emissions, helping to combat climate change.



Blanket bog

Bad na Gallaig SSSI includes an undulating plateau which reaches its highest point at Pole Hill (294 m) and slopes gently down to the north with steeper ground to the south.

The site contains numerous lochs and forms part of the watershed between Strathnaver and Loch Loyal. Much of this site is covered by internationally important blanket bog habitat. The location of this site, together with the varied geology, give rise to a combination of bog and vegetation types that are found in few other places.

There are a wide variety of bog types, which cover much of the site, including watershed, valley, basin, terrace and saddle fens. The largest areas of ladder fen in Caithness and Sutherland occur on this site and the adjoining Loch Meadie Peatlands SSSI. Ladder fens are areas of nutrient-enriched peatland with a series of parallel, long, narrow pools, separated from each other by narrow ridges (Figure 1). The vegetation in ladder fens often includes slender sedge and bog sedge. Large hummocks of Sphagnum moss and deep pools can be found in other parts of the site

Shallow peat on the many knolls and larger hills supports widespread wet and dry heath. Flush communities of varying degrees of species-richness are scattered throughout the area while swamp and other aquatic communities are associated with the many small lochs and streams. Most of the bog vegetation is dominated by purple moor grass (*Molinia*), deer sedge and hare's tail cotton grass. Sphagnum mosses are locally abundant, particularly in the wet areas that are least affected by burning and grazing. Some of these moss species form large hummocks. Slender sedge and the nationally rare bog orchid are found in the ladder fens. Heather, cross-leaved heath, bell heather and alpine bearberry, a plant with a restricted distribution in the UK, are found on some of the drier areas. Small, species-rich flush communities contain species such as black bog-rush, broad-leaved cottongrass, alpine meadow rue and a variety of sedges and mosses.

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| Figure 1. Ladder fen, showing the parallel pools that are typical of ladder fens | Figure 2. Dunlin |
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Monitoring of the blanket bog took place in summer 2006. A fire, started off the site, had spread into its southwest corner, damaging the blanket bog vegetation. Trampling damage by deer was also recorded as high at a single sampling point within the burnt area. The blanket bog was assessed as unfavourable due to the fire damage, though the remainder of the site appeared to be in good condition with a high water table and plant species characteristic of this habitat recorded. Measures have been taken to minimise the risk of future fires, and it is hoped the blanket bog will recover, though this may take many years.

Breeding bird assemblage

The combination of heath, bog and open water together with the varied relief of the area provides ideal conditions for a range of moorland birds and waterfowl. Species that were probably breeding on the site during monitoring in 2006 included: black-throated diver, golden plover, greenshank, dunlin (Figure 2), wigeon, merlin and red-breasted merganser. The diversity of species present and the suitability of most of the moorland habitat for breeding birds led to the breeding bird assemblage being assessed as being in favourable condition.

Past and present management

Bad na Gallaig SSSI is managed for sporting, agricultural and conservation interests. The number of sheep has been reduced in recent years. Red deer stalking is the most important sporting interest. Low ground pressure vehicles are used during the sporting seasons and for maintenance of fences. Peat cutting for domestic use is carried out within specified areas. A deer fence was erected along part of the southern boundary of the site in 2000. The deer fence around the Inchkinloch plantation was removed in 2004.

The majority of the site is managed under the Rural Stewardship Scheme (RSS) or the Peatland Management Scheme. The agreements under these schemes support good conservation management. In the case of Bad na Gallaig, good conservation management consists mainly of allowing natural processes to continue without any adverse intervention or disturbance. Muirburn is carried out only within specified areas in accordance with The Muirburn Code. The RSS agreement includes the use of quad bikes to disperse stock so that all parts of the site have appropriate stocking levels.

There are no specific facilities for visitors and few people visit the site at present.

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 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 the management agreement.

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, extent and distribution of the peatland habitats

Blanket bog depends on a continuous cover of special vegetation which continues the peat-forming process and protects the underlying body of peat. Damage to the moss cover exposes the peat surface to erosion from extremes of weather (drying, frost,

wind) and trampling from animals.

Some grazing of peatland habitats is beneficial, but sheep and deer stocks should be maintained at levels which result in no obvious damage to this vegetation from excessive grazing or trampling. Livestock numbers on areas covered by the Peatland Management Scheme should not exceed the agreed stocking levels.

Use of vehicles can also cause damage. Off established tracks, only low ground pressure vehicles should be used and care should be taken in their use. The choice of route is important: soft ground, sharp turns and areas where erosion is beginning to start should be avoided as bare peat can be very slow to revegetate.

Muirburn in areas covered by a management agreement (such as a Peatland Management Scheme agreement or Rural Development Contract) must follow the agreed muirburn plan. Outwith areas covered by a management agreement, any muirburn should be carried out following the Muirburn Code which recommends avoiding the burning of blanket bog and deep peat. Muirburn can cause serious long term damage to blanket bog.

It is important to maintain the natural water table in peatland habitats so no new drains should be made nor existing ones cleared. It would be beneficial to block old drains that are still active as these drains alter the natural water table and dry out the peat either side of the drain. They will also continually cut down through the peat until the underlying mineral layer is reached, creating further bare peat erosion surfaces.

Peat cutting for domestic purposes can be carried out without damaging the blanket bog by continuing to cut from existing banks, replacing the turf with the vegetation upwards as soon as possible. This will allow new peat to start to form again in the area that has been cut and minimise drying out of the bog. SNH should be consulted before any new peat banks are opened since careful positioning of peat banks is needed to ensure that large areas of blanket bog are not accidentally damaged by altering drainage patterns.

2. To maintain the water levels, water quality, extent and distribution of the clear water lochs and dubh lochans

Management in the areas around lochs should avoid activities that would release sediment, excessive nutrients or chemicals into the water. Activities that might alter water levels of lochs should be avoided. This objective can readily be achieved by maintaining the present management of lochs that allows natural processes to continue with minimal intervention or disturbance.

3. To maintain breeding bird populations and to avoid significant disturbance of birds during the breeding season. If the habitats on this site are maintained, following the advice given in the two Objectives for Management immediately above, breeding bird populations are also expected to be maintained. Disturbance can reduce the breeding success of nesting birds. It is important that any potential activities on the site are carefully planned to safeguard nesting birds from significant disturbance.

Red-throated and black-throated divers are particularly sensitive to human presence and, along with other uncommon species, are protected by special legislation. Their nests should not be disturbed during the breeding season since eggs may fail to hatch if they become chilled due to the parent birds being disturbed from the nest. Both eggs

and young chicks are more likely to be eaten by predators if the parent birds are not there to protect them. It is important that anglers avoid disturbing these birds during the period April to June, when they are nesting. Anglers should look out for divers when fishing on lochs and keep as far away from their nests as possible if fishing on larger lochs. On small lochs, anglers should move to a different loch if breeding divers are present. A leaflet on 'Black-throated divers and anglers' is available from SNH on request explaining how anglers can help divers by avoiding their nests.

Bird eggs and chicks are vulnerable to predation. Foxes, crows and mink are potential predators of eggs or young. Legal control of these species as part of general estate management is likely to be beneficial to breeding birds.

4. To maintain suitable otter habitat and access routes for otter across the site and avoid activities that might disturb otters. This objective can also be achieved by maintaining the present management that allows natural processes to continue with minimal intervention. Otter holts and other resting places should remain undisturbed. To safeguard the food supply of otters, water quality in burns, rivers and lochs should be maintained by avoiding activities that might add excess chemicals, nutrients or sediment. If any management is planned that might affect banks or piles of boulders where there could be otter holts, advice should be sought from SNH on how to avoid impacts on otters. Any fencing on the site that is likely to cross otter routes should have mesh with a large enough gauge to allow otters to pass through.

5. To maintain water quality of the River Naver SAC for the benefit of the Atlantic salmon and freshwater pearl mussel populations

Water levels and water quality play a crucial role in the suitability of the River Naver SAC for Atlantic salmon and freshwater pearl mussel. Where possible, any increase in drainage, abstraction or other activities affecting the hydrology or water quality in the river catchment should be avoided.

Other factors affecting the natural features of the site

- Forestry: Tree seedlings could potentially spread into the SSSI from the adjacent coniferous plantations damaging the blanket bog habitat. Forestry could also influence the hydrology of the peatland adjacent to the plantation, water flow rates and water quality in burns downstream of plantations. It may also influence breeding bird populations near plantations.
- Egg collecting: Some of the rare birds that breed on Bad na Gallaig SSSI are potential targets for illegal egg collecting. Any suspicious activity and description of cars and registration plates should be reported to the Police as soon as possible.

Date last reviewed: 12 February 2009

Annex 1. List of natural features of overlapping Natura sites that are not notified features of Bad na Gallaig SSSI

| Features of overlapping Caithness and Sutherland Peatlands Natura sites that are not notified as SSSI natural features | Feature condition (date monitored) | Designation |
|---|---|--------------------|
| Acid peat-stained lakes and ponds (dubh lochans) | Favourable, maintained (August 2004) | SAC |
| Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels | Favourable, maintained (July 2004) | SAC |
| Depressions on peat substrates | Favourable, maintained (August 2004) | SAC |
| Very wet mires often identified by an unstable 'quaking' surface | Favourable, maintained (August 2004) | SAC |
| Wet heathland with cross-leaved heath | Not assessed | SAC |
| Black-throated diver | Favourable, maintained (July 2004) | SPA |
| Common scoter | Favourable, maintained (August 2004) | SPA |
| Dunlin | Favourable, maintained (July 2004) | SPA, Ramsar |
| Golden eagle | Favourable, maintained (July 2003) | SPA |
| Golden plover | Favourable, maintained (July 2004) | SPA |
| Greenshank | Favourable, maintained (July 2004) | SPA |
| Greylag goose | Not assessed | Ramsar |
| Hen harrier | Favourable, maintained (June 2003) | SPA |
| Merlin | Favourable, maintained (July 2004) | SPA |
| Red-throated diver | Not assessed | SPA |
| Short-eared Owl | Not assessed | SPA |
| Wigeon | Not assessed | SPA |
| Wood Sandpiper | Favourable, maintained (June 2004) | SPA |
| Marsh saxifrage | Not assessed | SAC |
| Otter | Favourable, maintained (October 2004) | SAC |

Note - The Caithness and Sutherland Peatlands SAC, SPA and Ramsar sites comprise 39 SSSIs. The list of overlapping Natura features in the table above includes habitats and species found in the whole of the Caithness and Sutherland Peatlands SAC, SPA and Ramsar site. Some of these features may not be present on Bad na Gallaig SSSI and the presence of some species may vary from year to year.

| Features of overlapping River Naver SAC that are not notified as SSSI natural features | Designation |
|---|--------------------|
| Atlantic salmon (<i>Salmo salar</i>) | SAC |
| Freshwater pearl mussel (<i>Margaritifera margaritifera</i>) | SAC |

