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## BERRIEDALE WATER Site of Special Scientific Interest

### SITE MANAGEMENT STATEMENT

Site code: 201

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#### Purpose



This is a public statement prepared by SNH for owners and occupiers of Berriedale Water Site of Special Scientific Interest (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 Berriedale Water SSSI	Condition of feature (date monitored)
Upland birch woodland	Unfavourable, no change (September 2000)

Features of overlapping Natura sites that are not notified as SSSI natural features	Condition of feature (date monitored)	Designation
Atlantic salmon	Unfavourable, recovering (September 2004)	Berriedale and Langwell Waters Special Area of Conservation (SAC)

#### Description of the site

Berriedale Water Site of Special Scientific Interest (SSSI) is located in the southeast of Caithness, 7km southwest of Dunbeath. The SSSI is notified for its nationally important birch woodland. Native broadleaf woodland is a rare habitat in Caithness and together with Langwell Water SSSI just to the south, this is the largest tract of native woodland in the county.

#### Upland birch woodland

Large tracts of open broadleaved woodland grow on the steep slopes of the Berriedale Strath. The woodland is dominated by birch and rowan but fragments of birch-hazel woodland can be found on sandstone outcrops. These drier slopes support a relatively diverse moss, fern and herb field layer. Other tree species within the woodland canopy include hazel and aspen, with willow and alder becoming more abundant on the river bank, on the wetter ground. Typical woodland plants can be found growing below the trees including blaeberry, wood sage, wood sorrel, heath bedstraw, climbing corydalis, chickweed wintergreen and greater woodrush. In the damper parts of the site there is

some woodland mire vegetation with Sphagnum mosses in some areas whereas in other places there is opposite-leaved golden saxifrage and water forget-me-not and ivy-leaved water-crowfoot. Bracken is widespread throughout the woodland habitat.

The site was monitored in September 2000 when the woodland was assessed as being in unfavourable condition due to the level of deer grazing. Red deer over winter within the woodlands and the grazing pressure has prevented tree regeneration. As a result, there is an unbalanced age structure with a predominance of over mature, even-aged trees, with a significant reduction in the amount of tall fern and herb species within the ground layer.

More recent monitoring carried out in 2008 found that within the two deer fenced woodland exclosures, the ground flora and understory had flourished and natural tree regeneration was greatly improved, with large numbers of birch seedlings and saplings. However dense bracken was growing in some parts of the exclosures and may limit the successful establishment of seedlings in these areas. Outwith the exclosures the trees were of an advanced age, with no saplings or young reproductive trees. Grazing, browsing and trampling by herbivores appeared to be limiting tree regeneration outwith the exclosures. If this grazing pressure continues at the current level, the unfenced woodlands will not survive. The total absence of grazing in the fenced exclosures will also become an increasing problem because the ground flora will become too rank for continued tree regeneration.

**Other interests**

The Berriedale Water is a component of the Berriedale and Langwell Water Special Area for Conservation (SAC) in recognition of its internationally important population of Atlantic salmon. The Berriedale and Langwell Waters have two separate catchments, but share a short length of river just before they meet the sea. Whilst they are comparatively small rivers and support only a small proportion of the Scottish salmon population, they have a long history of low management intervention. Recent records indicate that all ages of salmon return to the river, with grilse, spring and summer salmon all being caught.

The pearl-bordered fritillary butterfly, a species which has declined rapidly across the UK, has been recorded on the north side of the Berriedale Water.

Birch woodland within exclosure showing natural regeneration	Birch woodland outside the exclosures - with no young trees
	

## **Past and present management**

The site and surrounding land use is managed primarily as sporting estate, with deer and red grouse being the main quarry species. Sheep grazing also occurs on common grazing land on part of the site.

In 1994 two deer fenced exclosures were erected under a Woodland Grant Scheme, as part of an ongoing long-term management agreement between SNH and the estate owners. The exclosures contain 7.6ha of woodland, equivalent to 3.5% of the total SSSI area, or 10% of the woodland habitat. The aim of the exclosures is to prevent overgrazing and allow natural tree regeneration.

There are no facilities specifically for visitors but some people pass through the site on the track between Berriedale and Braemore.

## **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 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 forms part of the formal notification documents of the SSSI. These, 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 enhance the condition and maintain the extent and distribution of the woodland**

The woodland should support trees of mixed age and contain a diverse mosaic of open and more shaded habitat types. Dead timber within the woodland, both standing and fallen, provides an important habitat particularly for fungi and invertebrate species and should not be removed from the site. Fires should not be started within or close to the woodland and care should be taken not to allow muirburn to spread into the woodland.

The condition of the whole woodland should be improved by keeping browsing from deer and sheep light enough to allow trees to regenerate and the ground flora to flower and set seed. Light grazing is beneficial as this creates small open patches that allow tree seedlings to establish. Grazing and trampling also helps to prevent bracken from

becoming too dense. Dense bracken can prevent seedlings from establishing and suppresses more light-demanding woodland plants. However, it is important that the grazing pressure is not so great that all seedlings and saplings are eaten and the ground flora is damaged by grazing or trampling. The main damage to young trees is likely to be in winter when animals use the woodlands for shelter.

The use of fencing to achieve woodland regeneration, particularly where small blocks of rotational fencing are used, can potentially create a number of problems. The total exclusion of grazing in fenced exclosures can inhibit woodland regeneration because the ground flora becomes too dense to allow tree seedlings to become established. If the grazing pressure outwith the fences is not reduced while the fences are up, when the fencing comes down, the restored woodland and ground flora are immediately damaged again. A further problem is that the fencing does not enclose a large enough area to ensure that the whole woodland survives in the longer term. Only 10% of the woodland on this site is currently protected by fencing, which means that trees are unable to regenerate in 90% of the woodland.

Stopping the cycle of decline and protecting these woodlands, which exist as fragments of what is likely to have once been a much larger area of woodland, is not easy. The remaining fragments attract grazing animals and this leads to further decline. In this case, the use of large fenced exclosures with a light grazing pressure inside them may be the best option. The longer term aim should be to expand the woodlands so that in the future they will be able to support higher numbers of grazing animals.

Scottish Natural Heritage and Forestry Commission Scotland are working with the land managers to secure the favourable condition of the woodland. The aim is to reduce grazing pressure and control bracken encroachment. It is intended that the project will be funded under the Scotland Rural Development Programme (SRDP).

The strategy, although not finalised to date, may include a combination of measures such as fencing, compensatory deer culls, maintaining suitable levels of stock grazing, supplementary planting and bracken control.

## **2. To maintain water quality of the Berriedale and Langwell Waters SAC for the benefit of the Atlantic salmon population**

Populations of Atlantic salmon and trout can be enhanced by good river management which includes maintaining clean water that does not contain excess nutrients and minimising sediment load that might smother the gravel beds where fish spawn. Encouraging the formation of shaded pools with overhanging branches, alder and willow can also benefit fish by providing a source of leaf litter and insects that can enhance their food supply.

The estate's current management approach of minimum intervention to the river will support this objective. The plans for riparian woodland restoration will enhance the condition of the river.

Date last reviewed: 9 September 2010