



**Scottish Natural Heritage**  
All of nature for all of Scotland

**MORRONE BIRKWOOD**  
**Site of Special Scientific Interest**

**SITE MANAGEMENT STATEMENT**

**Site code: 1190**

**Address:** Inverdee House, Baxter Street, Torry, Aberdeen AB11 9QA

**Tel:** 01224 266500

**email:** Tayside\_Grampian@snh.gov.uk

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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.

### **Description of the site**

Morrone (859m) is a foothill of the Cairngorms, overlooking Braemar, on south Deeside. The hill itself is dominated by acid rocks but a band of lime-rich rock on the mid slopes gives rise to small crags and a series of calcareous springs and flushes. The slopes below these outcrops support a mixture of juniper scrub and birch woodland, forming the finest example in Britain of a sub-montane birch-juniper wood on calcareous soils. The calcareous springs and flushes within the woodland form natural glades. Areas of calcareous grassland are also found and the adjacent dwarf-shrub heath is locally species-rich heath. A representative range of sub-montane and montane heathland habitats is found above the wood including both damp and alpine heath, the latter of which shows patterned wave erosion near the summit.

The flora is unusually diverse, at least 280 species of vascular plants and 270 species of bryophytes and lichen having been recorded. A number of rare species are found in the woodland, heathland and grassland and particularly on the crags and in the flushes. These include alpine cinquefoil, alpine rush, twinflower and intermediate wintergreen. The diversity of fungi is very high, particularly grassland species, with a number of rare species recorded. The invertebrate fauna includes a high proportion of northern and montane species, and a number of declining species and national rarities such as northern brown argus, green hairstreak and pearl-bordered fritillary butterflies and Geyer's whorl snail.

### *Geology*

The deepest of a series of small, shallow, infilled basins on the northern flanks of Morrone has yielded a comprehensive sediment and pollen record for the last 15 000 years. Stratigraphic, pollen and plant macrofossil analyses, supported by radiocarbon dating, have been undertaken on a sediment core from the basin. A detailed record

of environmental change and vegetational succession has been established from these data sources. This spans the Lateglacial period, comprising the short-lived warmer and cooler intervals known as the Lateglacial Interstadial and Loch Lomond Stadial, respectively, and the subsequent period from 11 700 years ago known as the Holocene (postglacial times). The rich floral diversity within the plant macrofossil record for the Lateglacial period is particularly notable and includes several species of saxifrage no longer found at Morrone and species of moss no longer found in Britain.

This fossil record provides the longer-term context of the unique present day arctic-alpine and northern montane flora, which is believed to have survived in refuge habitats, such as Morrone, since the Lateglacial period. The pollen record suggests that the present flora has survived comparatively unchanged since early post-glacial times, and it bears a close resemblance to natural sub-alpine woods found on limestone areas in Norway.

<b>Natural Features of Morrone Birkwood SSSI</b>	<b>Feature Condition (date monitored)</b>	<b>Other relevant designations</b>
Quaternary of Scotland	Not yet assessed	
Upland birch woodland	Unfavourable, no change (November 2009)	
Juniper scrub	Unfavourable, no change (October 2009)*	SAC
Spring-head, rill and flush	Favourable, maintained (August 2003)	SAC
Basin fen	Not yet assessed	SAC
Subalpine calcareous grassland	Favourable, maintained (July 2003)*	SAC
Alpine heath	Favourable, maintained (July 2008)*	SAC
Vascular plant assemblage	Unfavourable, no change (August 2005)	
Bryophyte assemblage	Favourable, maintained (July 2010)	
Invertebrate assemblage	Favourable, maintained (August 2003)	
Fungi assemblage	Not yet assessed	

\*Assessed for SAC

<b>Features of overlapping Natura sites that are not notified as SSSI natural features</b>	<b>Feature condition (date monitored)</b>	<b>SPA or SAC</b>
Whorl snail <i>Vertigo geyeri</i>	Favourable, maintained (August 1998)	SAC

The upland birch woodland and juniper scrub were recently assessed for cycle 2 of SNH's Site Condition Monitoring programme. Both were assessed as being in unfavourable condition outside the deer fence mainly due to of the lack of establishment of regeneration and extent of heavy browsing impacts. The subalpine

calcareous grassland was assessed as favourable in cycle 1 monitoring, with the high grazing pressure across the site helping to maintain the extent of the feature and prevent scrub encroachment. The spring-head, rill and flush feature was favourable in August 2003, again with the grazing pressure in some areas helping to maintain the open flushes.

The vascular plant assemblage was unfavourable in August 2005. This was caused by a mixture of overgrazing outside the exclosures and undergrazing within. The bryophyte and invertebrate assemblage features were assessed as favourable maintained. The invertebrate assemblage was assessed using the presence of suitable habitat as a proxy for the presence of invertebrates supplemented with moth records.

### **Past and present management**

Cultivation was formerly carried on the eastern margins of the site near the village, though these fields have remained uncultivated in recent years. In 1992 a small field was ploughed and planted with turnips, by mistake. It was agreed that in 1994 the field should be re-seeded with a suitable grass mixture, and that a hay crop could be taken once to promote colonisation of wild flowers, and subsequently grazed by sheep.

Parts of the site have been fenced to exclude red deer and allow the natural regeneration of birch. The unenclosed areas of the site are grazed by red deer. Some red and roe deer are shot and grouse shooting occasionally occurs on the southerly margins of the SSSI. The attractiveness of the wildlife and landscape along with its proximity to Braemar make Morrone a popular recreational area. From the public car park on the edge of Braemar a network of tracks and paths, some of which have recently been waymarked, give access to the woodland and lower slopes and summit of Morrone. The site is popular with a range of educational groups, particularly from the field centre at Kindrogan, and the route of the Braemar Hill Race lies partly within the SSSI.

There are water intake facilities and a small reservoir on the site, which formerly supplied the village of Braemar. Two private water supply reservoirs are also located on the SSSI.

### **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 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).

### **1. To maintain the distinctive habitats and their associated flora and fauna**

Deer grazing has prevented natural regeneration of tree species outwith the current fenced areas. Therefore, the current location of fencing should be reviewed and further fencing may be required to allow regeneration outside the current area and prevent damage to the juniper scrub. Ideally the woodland should be allowed to expand up to natural altitudinal limits, whilst retaining open glades of flushes and grassland within the woodland. Some grazing within any fenced enclosures will need to be maintained at levels low enough to prevent erosion and compaction and to allow further regeneration within the woodland and into heathland areas whilst preventing tree and shrub expansion onto the important open-ground habitats. Concerns have been expressed that fencing for the benefit of the woodland may lead to loss of calcareous grassland and increased shading and nutrient enrichment, to the detriment of the bryophyte and fungi assemblage features. The whorl snail SAC feature depends on the maintenance of open flush habitats.

Uncontrolled heather burning or accidental fires could be damaging to the range of habitats within the site. Water abstraction could be damaging to the springs and flush habitat and associated flora and fauna, including the important population of the rare snail.

### **2. To maintain the physical and visual integrity of the sediments in the basins on the northern flanks to ensure the availability of material for future sampling and research**

The sediment profiles present within the topographical basins on the northern flanks of Morrone are relatively limited in their lateral extent and therefore must be adequately preserved. It is critical that the sediments are not disturbed or exploited, thereby enabling further detailed study.

Date last reviewed: 14 June 2011.