



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

**BEN MORE - STOB BINNEIN**  
Site of Special Scientific Interest

**SITE MANAGEMENT STATEMENT**

**Site code: 190**

**Address: The Beta Centre, Innovation Park, University of Stirling, Stirling. FK9 4NF**  
**Tel: 01786 450362** **email: [Argyll\\_stirling@snh.gov.uk](mailto:Argyll_stirling@snh.gov.uk)**

**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.

<b>Natural features of Ben More – Stob Binnein SSSI</b>	<b>Feature condition (date monitored)</b>	<b>Other relevant designations</b>
<b>Tall herb ledge</b>	Unfavourable, no change (July 2005)	None
<b>Alpine heath</b>	Unfavourable, no change (July 2005)	None
<b>Alpine moss heath and associated vegetation</b>	Unfavourable, no change (July 2005)	None
<b>Vascular plant assemblage</b>	Unfavourable, declining (August 2003)	None
<b>Lichen assemblage</b>	Unfavourable, declining (November 2004)	None

**Description of the site**

Ben More - Stob Binnein Site of Special Scientific Interest (SSSI) is a hill massif within, but at the southern edge, of the Breadalbane range of hills. The site lies at the western end of Loch Doine in Balquhidder glen, 11 km west of the village of Balquhidder, and within the Loch Lomond and The Trossachs National Park. There are 8 summits rising above 800 metres, the highest being Ben More (1174m), Stob Binnein (1165m), Cruach Ardrain (1045m) and Beinn Tulaichean (945m). Together they form the most southerly hills in the highlands exceeding 1070m and possess many notable montane features. The underlying rocks and soils are predominantly nutrient-poor, but there are limited outcrops of nutrient-rich rocks, which in turn support the range of associated species-rich flora for which the Breadalbane Hills are internationally important. Ungrazed ledges support tall herb communities in which a great diversity of alpine species occur.

This is one of a series of high altitude sites, with outstanding plant communities and species, developed on soils arising from nutrient-rich underlying rocks in the Breadalbane Hills. Many of the communities are unusual so far south in the Scottish Highlands, and indicate the severe montane climate of the massif.

The tall herb community is found mainly at the south western side of the massif, in the vicinity of Craig Artair and Stob Invercarnaig. This community comprises luxuriant herb-rich vegetation on more lightly grazed cliffs and hillsides, and is characterised by species such as great woodrush and water avens, as well as species such as lady's-mantle and wild thyme.

The alpine heath vegetation is largely restricted to areas on the western slopes of Stob Coire an Lochain. This type of heath is an important part of the natural altitudinal sequence of vegetation in the British uplands, replacing heather where snow lies moderately late in spring. It is dominated by blaeberry and wavy hair-grass, with other grasses such as sheep's-fescue, common bent and sweet vernal-grass also occurring.

The alpine moss heath and associated vegetation communities are generally to be found across the site on the summits and ridges that are most exposed, and at the heads of corries and steep slopes where snow tends to accumulate in winter. They are dominated by mat-grass and stiff sedge, with woolly hair-moss also occurring in some areas. These near-natural climax vegetation communities represent some of the best examples of their type in the Stirling Council area.



The site supports an outstanding assemblage of upland vascular plants, many of them nationally scarce. Species present include russet sedge, rock whitlowgrass, two-flowered rush, alpine mouse-ear and sibbaldia.

The lichen assemblage on Ben More - Stob Binnein is also considered to be of national importance, with a number of rare species recorded from the site.

The tall herb ledge feature; alpine heath feature; and alpine moss heath and associated vegetation feature were all last monitored in July 2005, and all found to be in unfavourable, no change condition. The tall herb ledge feature failed targets relating to the lack of certain key species, the lack of flowering in evidence, and the low growth of the vegetation. The alpine heath vegetation was found to contain too many grassland species, over-browsing and grazing were very evident, and there was a very low percentage cover of key indicator species. Over-grazing, and over-abundance of grasses, were failed targets for the alpine moss heath vegetation.

The vascular plants were last monitored in August 2003 and found to be in unfavourable, declining condition, as fewer species were found than expected, and those found had low populations, or showed poor growth and regeneration.

The lichen assemblage was monitored as part of a 'desk exercise' (i.e. no field survey was undertaken) in November 2004 and also found to be in unfavourable, declining condition. A field survey and monitoring exercise has been carried out during 2010, and results from this are anticipated in early 2011.

Inverlochlarig Burn looking north towards Stob Binnein	Blaeberry
	

### Past and present management

Most of the site has been used for rough grazing of sheep and cattle over an extended period of time, and deer-stalking is also a long-standing land use. A commercial conifer plantation was established to the north east of the SSSI during the 1960s. This area was enclosed and an unplanted section is within the SSSI. Livestock have been excluded and deer are heavily culled in this area allowing some natural regeneration of native woodland.

A long term SNH Management Agreement has been in place since 1989 with the owners on the southern section of the site, by Inverlochlarig. This agreement places a limit on the stocking density of sheep and cattle, as well as addressing other land management issues including muirburn and stock feeding.

The Forestry Commission Scotland (FCS) own land at north east side of the SSSI. An agreed Management Plan has been put in place for the period 2008 -13. This contains actions relating to deer control; removal of conifer regeneration within the site; establishment of a wider buffer zone between the adjacent conifer plantation and the SSSI to prevent conifers seeding into the SSSI; and monitoring of the vegetation communities.

Some areas of new native woodland were established around the Inverlochlarig Burn, immediately adjacent to the SSSI, around ten years ago, with fencing put in place to exclude grazing stock.

A Herbivore Impact Assessment (HIA) study was undertaken in 2007, using standardised methodology, in order to assess the current levels and patterns of herbivore grazing and trampling on some of the vegetation features of interest. This was in response to the outcomes of the Site Condition Monitoring exercise, which concluded that all the notified features of the SSSI were in unfavourable condition, primarily due to high sheep grazing levels. Key findings of this were that:

- The alpine heath feature was found to have mostly moderate, with some high, herbivore impacts, and that the impacts appeared to have been 'chronic', ie the impacts have been sustained for some time.
- The alpine moss heath and associated vegetation feature showed low to

moderate herbivore impacts on the slopes, but high impacts on the tops and ridges, primarily from sheep but also from deer.

- Altogether, chronically high levels of grazing and trampling were found to be affecting 6% of the alpine heath vegetation and 23% of alpine moss heath and associated vegetation communities. The impacts were mostly around Ben More, Stob Coire an Lochain and Cruach Ardrain.

Informed by the Herbivore Impact Assessment, a collaborative Upland Grazing Plan was prepared for the site in October 2009. This looks in detail at the current grazing levels and patterns across the four management units on the site, and considers future options for modifications to these in order to address the unfavourable condition issues on the SSSI in a way that would be practicable and sustainable for the farm businesses involved. Unfortunately, uncertainties about how the grazing plan would affect the subsidies available to the relevant farms have made it impractical to take the grazing plan forward at this stage.

The site is an increasingly popular destination for hill walkers and climbers, and visitor pressure has resulted in some localised trampling impacts of around the summits.

### **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 and management plan.

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 and extent of the tall herb ledge, alpine heath, alpine moss heath and associated vegetation, vascular plants and lichens.**

As the farm subsidy framework evolves, continue to seek practical ways of ensuring that grazing and browsing levels are at appropriate levels which enhance the extent and condition of key upland vegetation communities. Continue to remove non-native conifers from becoming established within the SSSI boundary.

Date last reviewed: 21 January 2011