



Scottish Natural Heritage

TWEEDSMUIR HILLS
Site of Special Scientific Interest

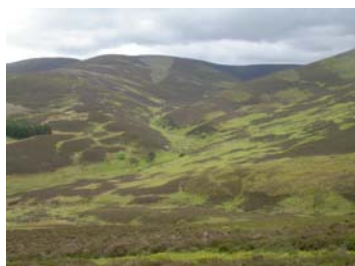
SITE MANAGEMENT STATEMENT

Site code: 1573

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Purpose



A view up Drumelzier
Burn, Tweedsmuir Hills

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

Tweedsmuir Hills Site of Special Scientific Interest (SSSI), located approximately 10km south-east of Biggar, is a high, rounded range of hills formed from sedimentary rocks from the Silurian period. Rising to 840m at Broad Law, they encompass the largest area of montane plateau in South Scotland, and the highest summits of the Scottish Borders. The ridge between Pykestone Hill (737m) in the north and Cairn Law (717m) in the south is the watershed for the headwaters of the Tweed River, Yarrow and Megget Waters and their numerous tributaries, running in steep-sided valleys, dissect the plateau. The site experiences low temperatures, high exposure and late snow lie and this is reflected in the plant and animal communities that occur here, including a nationally important example of an upland habitat assemblage, a nationally important assemblage of breeding birds, a diverse assemblage of bryophytes and a vascular plant assemblage comprising a number of nationally scarce arctic-alpine species. The Tweedsmuir Hills are important for their landscape quality and the northern part of the SSSI falls within the Upper Tweeddale National Scenic Area (NSA).

The upland habitat assemblage consists of subalpine dry heath; blanket bog; alpine heath; alpine moss heath; springhead, rill and flush; and juniper scrub.

Subalpine dry dwarf shrub heath is well represented across the site. Below the treeline in the Glenheurie, Stanhope and Drumelzier Glens, dry heaths containing an abundance of bearberry and petty whin are found on the drier south-west facing slopes. Bearberry is only known from one other site in south Scotland. On the moister north-east facing slopes, blanket bog rich in bog mosses *Sphagnum* spp., heather and blaeberry occurs. Blanket bog also occupies some of the flat tops of the subsidiary ridges, where it is dominated by hare's-tail cottongrass and heather with abundant cloudberry at some locations.

Below the main ridge on Glenstivon Dod and other subsidiary summits, alpine heath occurs as dwarfed wind-clipped mats of heather with abundant lichens. These heaths are unusual south of the Highlands. Blaeberry snow-bed heath, principally a highland community, occurs in the Polmood Corrie and other areas of snow lie, and contains dwarf cornel.

On the summit ridge, alpine heaths dominated by blaeberry and sheep's-fescue and rich in reindeer lichens *Cladonia* spp. are found on the flatter ground. On the more hummocky ground, alpine moss heaths of woolly fringe moss and sheep's-fescue dominate. Stiff sedge is found throughout both of these two communities and dwarf willow sparingly in the latter.

Springs found on the site include both the acid *Philonotis fontana*-*Saxifraga stellaris* spring and the base-rich *Cratoneuron commutatum*-*Festuca rubra* spring. A few stands of juniper represent one of the few remaining fragments of juniper scrub in this part of the Southern Uplands.

The upland assemblage is currently considered to be in an unfavourable condition due to a loss in the extent of the alpine heath community and the limited extent of juniper scrub. The other components of the upland assemblage are considered acceptable at present but it should be noted that the 2005 site condition monitoring (SCM) assessment looked only at the extent of each component habitat. A more detailed survey looking at the condition of the habitats would be likely to reveal damage due to factors such as past overgrazing and inappropriate burning.

The site supports one of the most diverse assemblages of upland breeding birds in the Scottish Borders, including species such as ring ouzel and black grouse that have suffered significant declines elsewhere in Scotland. The formal notification of the breeding bird assemblage includes red grouse, black grouse, golden plover, curlew, dunlin, common snipe, ring ouzel, whinchat, stonechat and wheatear. Several protected bird species also use the site for foraging while breeding off-site, in winter or on passage.

The breeding bird assemblage is currently considered to be in a favourable condition. 14 species were recorded breeding or attempting to breed in 2009. Golden eagle continues to nest off-site but, as much of the site is within their home range, have been included. Redshank and hen harrier were both recorded in 2004 but were not recorded in 2009 despite the availability of suitable habitat.

The most important bryophyte species from a conservation perspective occur in relatively restricted habitats across the site. Many of these species occur in a mixture of base-rich and base-poor flushes, such as the flush complex below Little Craig. These areas support a rich flora of widespread flush species as well as nationally scarce species such as Duval's thread-moss, and rugged collar-moss, a species that often grows on herbivore dung. Crags and rocks are relatively scarce across the site but support some important species such as the nationally scarce sickle-leaved fork-moss and other species that are indicative of calcium-rich rock such as crisped neckera and the nationally scarce Lapland yoke-moss. Additional bryophyte interest on the site includes species that are associated with the restricted western oceanic climate zone (warm, wet winters and cool, wet summers) such as golden-head moss, and the nationally scarce blue pouchwort. Talla Linn is the main locality for these species. In total, 15 nationally scarce bryophytes have so far been recorded from the site, although a minority of these have not been seen for some time.



The bryophyte assemblage is currently considered to be in a favourable condition overall, with 43 species of liverwort and 152 mosses recorded during the 2004 and 2009 SCM visits. The limited area of rock exposure and scree were found to be in good condition. Bryophyte communities within springhead, rill and flush communities were also found to be in good condition. Management appears to be favourable with respect to these two important bryophyte habitats; however, grazing and burning pressure within grassland and heathland are likely to be adversely affecting the other bryophyte species within these areas. Parts of the blanket bog were found to be eroded and partially dried out in places, though the continued presence of species such as magellanic bog-moss indicate that other areas have a sufficiently high moisture content.

There are relatively few crags within the site due to the nature of the topography. The nationally scarce plants which form the vascular plant assemblage are mainly associated with springhead, rill and flush communities on the slopes below these crags. These include alpine foxtail, pale forget-me-not, hairy stonecrop and sheathed sedge. Other plants found here include limestone bedstraw, stone bramble and mountain sorrel.

The vascular plant assemblage is currently considered to be in an unfavourable condition. During the most recent SCM assessment in 2004, only two out of the four component species were located on the site. Healthy populations of pale forget-me-not and hairy stonecrop were both relocated at known sites and a new population of hairy stonecrop was discovered. However, alpine foxtail and sheathed sedge could not be found. This may have been due to the fact that both are small, easily overlooked plants for which there had only been one historical population recorded from the site. In fact, repeat monitoring is currently underway and has re-found sheathed sedge at two new locations although not at its original site.

The site also supports large areas of acid grassland and small areas of calcareous grassland. Woodland planting exclosures have been created along the Stanhope Burn and elsewhere and are developing well. The invertebrate fauna is largely unknown although the fly *Alliopsis conifrons* has been recorded. Several scheduled ancient monuments are situated within the site.

Natural features of Tweedsmuir Hills SSSI	Condition of feature (and date monitored)
Upland assemblage	Unfavourable, declining (August 2005)
Breeding bird assemblage	Favourable, maintained (June 2009)
Bryophyte assemblage	Favourable, maintained (September 2004)
Vascular plant assemblage	Unfavourable, declining (November 2004)

	
<p>The nationally scarce bryophyte Duval's thread-moss <i>Bryum weigelii</i> which grows in mountain springs and flushes</p>	<p>Golden plover (©Lorne Gill) – one of the breeding bird species found on the high ground at Tweedsmuir Hills SSSI</p>

Past and present management

Grazing by a range of domestic animals has been carried out on the Tweedsmuir Hills for several centuries and present management is mainly sheep farming and grouse moor. In the past, flocks were shepherded closely so that grazing impacts would have been fairly evenly spread but the decline in shepherding since WWII combined with a historical increase in the stocking rate of sheep has resulted in overgrazing of some areas and undergrazing in others. This has been combined with a change in the pattern of muirburn, with too little burning in some areas of dry heath (such as those near neighbouring forestry), too much burning in others and inappropriate burning on steep slopes and within areas of blanket bog. This has led over time to a degradation of the habitat with a loss of the area and quality of heather cover and an increase in areas of grassland, erosion in areas of blanket bog and overgrazing among the alpine moss heaths. Bracken cover has also increased while grouse bags and driven grouse shooting have declined. In recent years, several landowners have put in considerable effort to halt and reverse these trends.

For a period of 10 years from the mid-1990s, almost all of the farms within the SSSI signed up to the Central Southern Uplands Environmentally Sensitive Area which provided incentive payments geared towards restoration of heather moorland. The main methods used were stock management, reduction/control of bracken and a planned programme of muirburn. These agreements were largely replaced by Rural Stewardship Scheme (RSS) agreements which, broadly speaking, carried on the incentive payments available under the ESA agreements. Four farms, covering just over half of the SSSI, also signed up to additional Moorland Management Scheme agreements under SNH's Natural Care programme. These schemes were developed to supplement the sympathetic management measures available through RSS, paying for a variety of measures including targeted stock reduction, shepherding, fencing, additional bracken control, targeted muirburn (including re-burning to encourage heather seed germination in areas affected by heather beetle damage) and predator control. The aim of all this work is to halt the decline in the condition of the notified features and contribute towards bringing the site into favourable condition.

Under an SNH Management Agreement, two exclosures were established in the Stanhope Valley in 1993 to protect existing native woodland and encourage regeneration. These areas are now developing well and in 2009 the landowner submitted plans to link up the two exclosures with a further 11 hectares of new woodland. The primary aim of this work is to improve the habitat for black grouse which regularly breed within the SSSI. Other cleughs within the site have also been fenced to encourage regeneration of native woods. The fences have been marked to prevent bird strike.

The majority of the agreements in place across the SSSI are due to expire by the end of 2011. As they come to an end, future funding for positive management measures may be available through Rural Development Contracts which are run under the Scotland Rural Development Programme (SRDP)(available 2007-2013).

Apart from grouse shooting, recreational use of the Tweedsmuir Hills is low. Hill walking takes place predominantly along the main ridge and drove roads. The path from Manor to St Mary's Loch, which forms part of the boundary of the site, is a popular route.

A number of organisations, including the Civil Aviation Authority and Lothian & Borders Police, have equipment situated on Broad Law and elsewhere within the site. Care should be taken by these organisations to avoid damage to the notified features while accessing their equipment or during routine maintenance of the access tracks.

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 monitor the effectiveness of the management agreements.

- 1. To maintain the extent and condition of the upland habitat assemblage and the vascular plant assemblage** by controlling grazing levels, ensuring an appropriate muirburn programme is carried out and controlling invasive species, particularly bracken where necessary.

The condition of upland habitats is influenced by numerous factors, including grazing, muirburn and the control of bracken. SNH will offer land managers support and advice to manage the habitats in a manner likely to maintain their extent and optimise their condition, and particular advice on the requirements of the species that comprise the vascular plant assemblage.

Sheep numbers should be managed and maintained at a sustainable level, i.e. without detriment to the existing vegetation. Appropriate grazing regimes will require sufficient grazing to prevent dominance by more competitive species, but not so much grazing that the typical flowering plant species are unable to flower and set seed in reasonable abundance. The vascular plant assemblage consists of plants of relatively short stature. Hairy stonecrop and pale forget-me-not are unpalatable to sheep and appear to be surviving well with the existing grazing levels. However, sheathed sedge and alpine foxtail are both shy-flowering species that tend to be grazed off. Both species can survive in a vegetative state but may flourish better if allowed to flower and set seed under a lighter grazing regime.

Any programme of muirburn should be carried out in accordance with the principles and practice contained within 'A Muirburn Code' (Scottish Government 2008 or later edition). Bracken control should be carried out in accordance with Bracken Control - A Guide to Best Practice (Scottish Government 2008 or later edition).

- 2. To maintain a diverse assemblage of upland breeding birds on the SSSI, including the distribution and populations of species across the site**, by promoting beneficial land management and by avoiding significant disturbance.

SNH will advise on the habitat requirements of the different species that comprise the assemblage, including land management options to promote their populations. We will also advise on the sensitivity of breeding birds to disturbance at different times of year.

- 3. To maintain the extent and condition of the bryophyte assemblage** by maintaining appropriate grazing levels and appropriate muirburn practice.

An important component of the bryophyte assemblage within the site occurs in areas of exposed rock and scree where the main management requirement is one of deliberate non-intervention. Bryophyte interest within springhead, rill and flush communities may be vulnerable to damage by trampling should grazing levels across the site be too high. In blanket bog, dry heathland and grassland areas, appropriate grazing regimes will require sufficient grazing to prevent dominance by more competitive species, but not so much grazing that the bryophyte interest is damaged by trampling and erosion within the site. As mentioned above, any muirburn should be carried out in accordance with "A Muirburn Code" and particular care should be taken to avoid burning at Talla Linn, where the oceanic species are most abundant, and on areas of thin soils and exposed rock.

Other factors affecting the natural features of the site

None noted at present.

Date last reviewed: 10 March 2011