



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

**FOINAVEN**  
**Site of Special Scientific Interest**

**SITE MANAGEMENT STATEMENT**

**Site code: 647**

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

[north\\_highland@snh.gov.uk](mailto:north_highland@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.

This statement is available in Gaelic on request.

<b>Natural features of Foinaven SSSI</b>	<b>Condition of feature (and date monitored)</b>	<b>Other relevant designations</b>
<b>Moine (geology)</b>	Favourable, maintained (June 2003)	
<b>Blanket bog</b>	Unfavourable, no change (August 2010)	Special Area of Conservation (SAC)
<b>Breeding bird assemblage</b>	Favourable, maintained (June 2007)	Golden eagle are also part of the Foinaven Special Protection Area (SPA)
<b>Dystrophic and oligotrophic lochs</b>	Favourable, maintained (July 2004)	Some of the interests of the SAC (listed in Annex 1) are components of this interest
<b>Upland assemblage (upland habitats)</b>	Favourable, maintained (October 2004)	Some of the interests of the SAC (listed in Annex 1) are components of this interest
<b>Upland birch woodland</b>	Unfavourable, declining (September 2002)	

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

**Description of the site**

Foinaven Site of Special Scientific Interest (SSSI) is located 11km south east of Kinlochbervie. The site encompasses the foothills and mountains of Foinaven, Arkle and Cranstackie, which surround Strath Dionard. The scale of the site is such that it includes a wide range of habitats, from open moorland and river valley to exposed

mountain summits. The site is notified for the peatland, upland habitats, freshwater lochs, woodland, assemblage of breeding birds and Moine geology. These are all of national importance.

Much of the SSSI is also designated as a Special Area of Conservation. This designation recognises the European importance of the upland, peatland and loch habitats, and the freshwater pearl mussel and otter populations. The SSSI is also part of the Foinaven SPA of European importance for golden eagle. A list of the habitats and species that are protected by each of these designations can be found in Annex 1 below.

### **Moine (geology)**

The site contains a superb section through the Moine Thrust Zone. This was formed when Moine rocks laid down in the east were forced westwards over younger quartzite rocks as a result of continental collision 430 million years ago. The Moine Thrust Plane runs through the Allt Horn valley and over Meall Horn, separating the highly deformed, streaky Moine rocks to the east from the undeformed quartzites and gneisses to the west. Following this major thrust, a number of smaller thrusts occurred “piggy-backing” on top of each other and creating stacks of thrusts known as duplexes. These are best seen in the cliffs of Arkle, Cranstackie and Creag Urbhard, which form some of the best examples of a duplex anywhere in the world.

The Moine feature was monitored in June 2003. The geological interest of the SSSI was found to be in good condition and there are no obvious threats to it. As a result it was assessed as being in favourable condition.

### **Blanket bog**

The area of blanket bog is associated with most of the flat or gently sloping Gneiss terrain. A series of small, well-defined valley bogs with patterned pools and hummocks has developed on the terraces alongside the River Dionard. These are considered to be one of the best examples in the UK of this type of peatland. The vegetation within the blanket bog largely consists of heather, deer sedge and cotton grass, with abundant bog moss, woolly-hair moss and other Atlantic mosses and liverworts. Sundew species are also common.

The blanket bog was last monitored in October 2004 when it failed to meet the targets for two reasons. There was a lack of typical species which should have been present across the areas monitored, and there was too much disturbed bare ground. As a result the blanket bog was found to be in unfavourable condition.

### **Dystrophic and oligotrophic lochs**

On the lower moors there are numerous fresh water lochs. These range in size from dubh lochans to large, naturally nutrient-poor lochs. These support a range of aquatic vegetation including broad leaved pondweed, shoreweed, water awlwort, alternate water-milfoil, water lobelia, intermediate water starwort and the nationally scarce six-stamened waterwort.

This feature was monitored in July 2004 and the lochs were found to have appropriate nutrient levels, no excessive algae and minimal amounts of sediment. As a result the lochs were found to be in favourable condition.

### **Upland assemblage**

The 'upland assemblage' is composed of an impressive range of upland habitats. The varied geology on the site gives rise to a wide range of montane and submontane habitats and Arctic-Alpine species grow at comparatively low altitude. The higher parts of the site contain large areas of **Alpine heath**. A range of northern Atlantic liverworts have developed as discontinuous mats on the quartzite plateau of Cranstackie-Conamheall. Stands also occur on large areas of quartzite scree on the south-east-facing slopes of Arkle. The site also hosts rare species-rich **snowbed** grasslands with moss. This habitat supports species which survive long periods of snow cover. Foinaven SSSI also hosts the largest extent of **Alpine moss heath** in the north of Scotland. Steep and shaded slopes at high altitudes support thick, dense carpets of woolly hair-moss *Racomitrium lanuginosum* and an abundance of cushion herbs. The geological influences are obvious with **rocky slopes (calcareous)** and **siliceous scree** found on the exposed upper slopes. Here, species with deep roots and which are resistant to exposure grow on this base-rich rock habitat. The calcareous rocky slopes have developed on Cambrian Serpulite Grit and Furoid Beds and dolomitic Durness Limestone, while the siliceous scree consists of vast areas of broken quartzite. The high Moine Schist cliffs in the north-east corries of Meall Horn support **tall herb ledge** communities, with a rich cliff flora including green spleenwort, holly fern and the nationally scarce alpine saxifrage. Ledges on other cliffs support a rich tall herb flora, including the nationally scarce pyramidal bugle. There is local base-rich flushing from the Moine schists and limestone giving rise to small stands of **subalpine calcareous grassland**, with areas rich in arctic-alpine flora. This has a very limited distribution in the north-west Highlands.

The lower areas of the site contain extensive areas of **subalpine wet heath** with cross-leaved heather *Erica tetralix*. At the higher altitudinal range of the wet heath, such as on the lower parts of the exposed quartzite plateau of Cranstackie-Conamheall, the flora has an exceptional montane element, grading into prostrate montane heaths higher up on the plateau. The site is outstanding for **subalpine dry heath** which contains a number of different plant communities. These include Atlantic liverwort-rich heath (*Calluna-Vaccinium-Sphagnum* heath, *Herbertus aduncus-Mastigophora woodsii* sub-community), a type that attains its largest extent in the north-west Highlands and Outer Hebrides.

The upland assemblage feature was monitored in October 2004. Although at the time this feature was found to be in favourable condition, subsequent assessments have highlighted deer pressure on some of the habitats and this is of concern.

### **Upland birch woodland**

In Strathbeg a birch wood on quartzite block-scrub supports an unusual abundance of rowan with a rich, oceanic moss and liverwort flora. This includes several Atlantic species which are at the northern limit of their range in Britain, such as *Isoetecium holtii*, *Frullania teneriffae germana* and *Harpalejeunea molleri*. The woods are sheltered by the hills both to the east and west. Complex geology with occasional outcrops of base-rich rock types, and the presence of the boulder field below the crags adds to the diversity of this woodland. This area supports hazel while alder is found in wetter areas by the river. A typical woodland ground flora is present, including blaeberry, wood sorrel and primrose.

The woodland feature was monitored in September 2002 and was found to be in unfavourable condition due to the lack of saplings. The lack of saplings has been attributed to high levels of deer browsing. Given the age structure of the woodland and shrinkage in area of woodland from that mapped by Ordinance Survey, it is clear that the more accessible parts of this woodland are under severe pressure. They are likely to be lost in the foreseeable future unless action is taken soon. Good seedling production gives hope that the decline can be reversed if appropriate management is introduced.

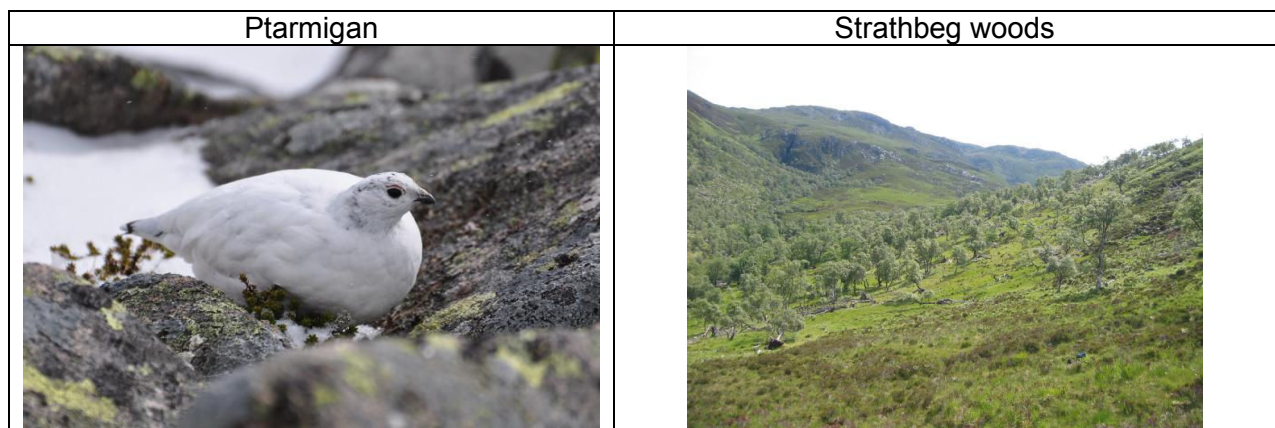
### **Breeding bird assemblage**

The extent and diversity of habitat provides ideal conditions for a wide range of birds to nest, hatch and rear their chicks. The breeding birds of Foinaven SSSI's upland areas are of national significance with raven, golden eagle, peregrine, ptarmigan, dotterel and snow bunting regularly nesting on the site. There is also an abundance of birds associated with moorland habitats including greenshank, merlin, dunlin, and golden plover.

The breeding bird assemblage feature was monitored in June 2007. Although some concerns were raised over the effects of deer trampling on potential nesting habitats, a number of the key species were observed either on nests or exhibiting breeding behaviour. The feature was found to be in favourable condition.

### **Other Interests**

Mammals characteristic of the upland environment are also present including pine marten, wildcat, badger, red deer and mountain hare.



### **Past and present management**

The site is primarily used for deer stalking, sheep grazing and salmon and trout fishing. Tracks within the SSSI are maintained to allow access to the hill for these activities by ATVs and four-wheeled drive vehicles. Muirburn is used as a management tool over much of the site. Some supplementary feeding of sheep and deer occurs at particular locations within or near the site during winter. Other management activities include pest control, the maintenance of existing drains and limited peat cutting from existing banks for domestic use.

An area of blanket bog and upland habitat in the northwest of the site has been entered

into SNH's Peatland Management Scheme. This promotes management practices compatible with the natural heritage interests of the site. No muirburn, stockfeeding or peat cutting take place on this area by agreement between SNH and the sporting and agricultural tenants. Stock numbers and ATV use are at a level which will not damage fragile peatland and upland habitats. SNH also has management agreements with three other owners of land within Foinaven SSSI.

The River Dionard is actively managed for its salmon fishery. Alder have been planted along the banks to improve bank stability and water nutrient levels and native salmon are artificially stocked into the river. A track through Strath Dionard is maintained mainly to allow access for anglers.

Foinaven is a Joint Working site. Sites join the Joint Working programme when the habitats have been surveyed and found to be in poor condition, due to grazing and trampling impacts. Often more detailed survey work is required to establish the nature and distribution of these impacts. In some cases the problems can be addressed by small adjustments to management practices. Solutions need to take account of the natural deer range and the practicalities of land ownership patterns. As a result of the recent Habitat Impact Assessment (HIA) on Foinaven, a series of discussions have been held, and arrangements made, between SNH and individual estate owners. Although all owners have agreed to increase their culls, no collaborative Deer Management Plan (DMP) or Collaborative Upland Habitat Management Plan has yet been agreed. The 2010 Habitat Impact Assessment results will be discussed with owners and a Section 7 agreement may be sought in order to bring features into favourable condition.

Loch Claise na Carnaich in the northwest of the site is managed as the public water supply for Kinlochbervie.

The wild nature of Foinaven, Arkle and Cranstackie is popular with walkers. There are few facilities and little interpretation on site.

### **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 agreements.

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).

The 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 extent, visibility and accessibility of the Moine geological feature**

The Moine outcrops are remote so it is unlikely that any developments or excavations would be proposed that might reduce their extent. Surrounding vegetation is not encroaching upon the features and the current level of grazing maintains the visibility and accessibility of the outcrops. The wider area attracts many geologists and on other sites there are some signs of over-zealous hammering on exposed outcrops by geologists. It would be helpful to point out to visiting parties of geologists that they should use their hammers in moderation and follow the Geological Code.

- [www.geologists.org.uk/downloads/GAfieldworkcode.pdf](http://www.geologists.org.uk/downloads/GAfieldworkcode.pdf).

### **2. To improve the condition and maintain the extent of the peatland habitats**

Sheep and deer numbers should be maintained at a level at which there is no obvious damage to the vegetation from grazing or trampling. Use of vehicles can cause damage to the vegetation, particularly in wet areas or if the same route is used frequently. If vehicles are to be used on the SSSI, the vegetation would benefit from the use of low ground pressure models, choosing routes that avoid wet ground and not using the same route too often. Any muirburn should be carried out following the Muirburn Code, and only in the areas identified by Peatland Management Scheme agreements where these apply. The Muirburn Code advises that blanket bog should not be burned. All possible measures should be taken to prevent fires getting out of control and the spread of accidental fires across the site. It is important to maintain the natural water table in peatland habitats, so the digging and clearing of drains should be avoided. There are numerous existing drains on Foinaven SSSI and the site would benefit from the blocking of active drains, which can attract payments through the Scotland Rural Development Programme.

### **3. 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.

### **4. To maintain the condition and extent of the upland assemblage habitats**

Grazing, by both domestic livestock and deer, should be kept at levels which do not damage the fragile alpine heath and scree vegetation. No burning of the alpine heath should take place, and any burning carried out on other areas of the site should be controlled to prevent it spreading into the alpine heath or onto areas of scree or ledge habitat. The Muirburn Code advises that there should be no burning of: areas with exposed peat; where the soil is eroding or if there is less than 2 inches of soil over the underlying rocks; summits, ridges and other areas very exposed to the wind; and steep hillsides and gullies. Vehicle use and trampling on the slopes of Foinaven should be minimised to avoid damaging the vegetation.

## **5. To improve the condition, distribution and extent of upland birch wood habitats within Strathbeg.**

The woodland should support a good range of tree ages - seedlings and saplings, young and mature trees and dead wood, both standing and fallen. Each stage provides habitats for a range of invertebrates, lower plants (e.g. mosses, lichens) and birds.

It is crucial that there is continued recruitment of seedlings and saplings of the full range of tree species. Grazing is required at a level that secures adequate levels of regeneration and allows the woodland ground flora to flower and set seed successfully. At Strathbeg, natural tree regeneration is being suppressed by sheep grazing and deer browsing.

Light grazing can be beneficial by creating small open patches that allow seedlings and ground flora to establish. However, the woodland survey results indicate that current deer numbers have been and are still too high and urgent action is required to reduce them to a level which will allow woodland regeneration. It is recognised that the deer using the site may be coming from surrounding areas outwith the land manager's control. Fencing is an option which could be considered if deer numbers are not reduced. However fencing by itself can in the longer term suppress woodland regeneration because the total exclusion of grazing leads to the build up of an impenetrable mat of ground vegetation. This makes it difficult for tree seedlings to become established. Fencing by itself fails to address the longer term problem of deer grazing pressure which will simply resume once the fences are removed.

Funding for positive woodland management may be available under the Scotland Rural Development Programme (SRDP) and SNH would encourage land managers to apply to the SRDP for relevant funding for conservation management of the site.

Dead wood, whether standing or fallen should be left on the site in a natural state. Fires damage both trees and plants that grow in the woodland. Therefore, extreme care should be taken not to allow any fires from adjacent ground to spread into this protected woodland site.

## **6. To avoid deterioration of the habitats, and to avoid significant disturbance to the breeding bird populations, including golden eagles.**

Excessive disturbance can reduce the breeding success of nesting birds. It is important that developments on the site are carefully planned and timed to avoid disturbance to nesting birds. Deer should be kept at numbers where they do not pose a threat to the nesting habitat of ground nesting species.

## **7. To maintain suitable otter habitat 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. Any known otter holts should not be disturbed. 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.

**8. To avoid deterioration of the habitats, and to avoid significant disturbance to the freshwater pearl mussels.**

Management in the areas around the lochs, rivers and burns should avoid activities that would release sediment, excessive nutrients or chemicals into the water. This objective can readily be achieved by maintaining the present management of rivers and burns that allows natural processes to continue with minimal intervention or disturbance. Freshwater pearl mussel fishing occurred frequently on rivers and burns in this area in the past. Since 1998 this activity has been illegal, but it still continues particularly in remote areas such as north Sutherland. Local people can play a vital role in combating this crime by reporting any suspicious activity to the police, including car registration plates.

**Other factors affecting the natural features of the site**

- Egg collecting: Some of the rare birds that breed on Foinaven SSSI are potential targets for illegal egg collecting. Any suspicious vehicles or activity should be reported to the Police.

Date last reviewed: 31 March 2011

**Annex 1. List of natural features of overlapping Natura sites that are not notified features of Foinaven SSSI.**

<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>
Acid peat-stained lakes and ponds <sup>2</sup>	Favourable, maintained. (July 2004)	SAC
Acidic scree	Favourable, maintained. (August 2010)	SAC
Alpine and subalpine heaths <sup>1</sup>	Unfavourable, declining (July 2010)	SAC
Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels <sup>2</sup>	Favourable, maintained. (July 2004)	SAC
Depressions on peat substrates	Unfavourable, no change. (July 2010)	SAC
Dry heaths <sup>1</sup>	Favourable, maintained (October 2004)	SAC
Freshwater pearl mussel	Unfavourable, recovering. (June 2009)	SAC
Montane acid grasslands	Favourable, maintained. (October 2004)	SAC
Plants in crevices on acid rocks	Favourable, maintained. (August 2010)	SAC
Plants in crevices on base-rich rocks	Unfavourable, declining (August 2010)	SAC
Species-rich grassland with mat-grass in upland areas	Unfavourable, no change. (August 2010)	SAC
Tall herb communities <sup>1</sup>	Favourable, maintained. (August 2010)	SAC
Wet heathland with cross-leaved heath <sup>1</sup>	Unfavourable, no change. (July 2010)	SAC
Otter	Favourable, maintained. (October 2004)	SAC
Golden eagle	Not yet monitored	SPA

<sup>1</sup> These SAC features are part of Foinaven SSSI 'Upland assemblage' feature

<sup>2</sup> These SAC features are part of Foinaven SSSI 'Dystrophic and oligotrophic lochs' feature