

EAST SUTHERLAND DEER
MANAGEMENT GROUP

DESIGNATED SITES

Appendix 3

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DESIGNATED SITES IN THE EAST SUTHERLAND DMG AREA

Within the DMG area there are five different types of designation:

National Nature Reserve (NNR)

Sites of Special Scientific Interest (SSSI)

Special Area of Conservation (SAC)

Special Protection Area (SPA)

Ramsar Site

In addition, 53,023 ha or 43% of the DMG area has recently been classified as “Wild Land”, along with significant areas in adjacent deer management groups. While it is not yet clear how such a classification will work in practice, it may well have important implications for fencing or woodland creation schemes, and therefore have a bearing on deer management. Furthermore, the Flow Country is on the UK’s ‘Tentative List’ of properties for consideration by UNESCO as a World Heritage Site.

There are no National Parks or National Scenic Areas within the area.

National Nature Reserves (NNR)

The first National Nature Reserves were designated 50 years ago, and at that time they were the cornerstone of nature conservation policy, safeguarding sites of national conservation importance as well as providing interpretative material and allowing the public to enjoy these sites. All NNRs are now designated as SSSIs to strengthen their protection. There are currently 65 National Nature Reserves in Scotland.

Site of Special Scientific Interest (SSSI)

Sites of Special Scientific Interest (SSSI) represent the best of Scotland’s natural heritage. They are ‘special’ for their plants, animals or habitats, their rocks or landforms, or a combination of such natural features. Together, they form a network of the best examples of natural features throughout Scotland, and support a wider network across Great Britain and the European Union.

Scottish Natural Heritage chooses sites after detailed survey and evaluation against published scientific criteria. SSSIs can include freshwater and sea water, down to the mean low water mark of spring tides, as well as land. At 31st March 2008, there were 1,456 SSSIs, covering a total area of 1,036,000 hectares or 12.9% of Scotland.

SNH designates SSSIs to protect the best of our natural heritage by making sure that decision-makers, managers of land and their advisors, as well as the planning authorities and other public bodies, are aware of them when considering changes in land-use or other activities which might affect them.

The Nature Conservation (Scotland) Act 2004 provides the legislative framework around which all SSSI sites are administered.

Special Area of Conservation (SAC)

Special Areas of Conservation (SACs) are areas designated under the European Directive commonly known as the ‘Habitats Directive’. Together with Special Protection Areas, which are designated under the Wild Birds Directive for wild birds and their habitats,

SACs form the Natura 2000 network of sites. Most SACs on land or freshwater in Scotland are also underpinned by notification as Sites of Special Scientific Interest (SSSIs). The additional SAC designation is recognition that some or all of the wildlife and habitats are particularly valued in a European context.

Special Protection Area (SPA)

A Special Protection Area (SPA) is an area of land, water or sea which has been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within the European Union. Special Protection Areas are designated under the European Wild Birds Directive and, together with SACs, form the Natura 2000 network of sites. A number of SPAs include areas notified as SSSIs and the additional SPA designation affords these areas enhanced protection.

Ramsar Site

Ramsar is the name of a town in Iran where the Convention on Wetlands of International Importance was adopted in 1971. The UK Government signed up to the Convention in 1976.

The mission of the Convention is *"the conservation and wise use of all wetlands through local and national actions and international co-operation, as a contribution towards achieving sustainable development throughout the world"*.

Currently 164 countries have signed up as Contracting Parties to the Convention with 2083 wetland sites designated for inclusion in the Ramsar List of Wetlands of International Importance.

There are currently 51 Ramsar sites designated as internationally important wetlands in Scotland, covering a total area of about 313,000 hectares. All Ramsar sites in Scotland are also either SPAs or SACs, and many are also SSSIs, although the boundaries of the different designations are not always exactly the same. It is not surprising that internationally important wetlands are also of European interest for a wide variety of waterbirds, bogs, lochs, coastal wetlands and other water-dependent habitats and species. Although there is no specific legal framework that safeguards Scottish Ramsar sites, they benefit from the measures required to protect and enhance the Natura sites and SSSIs which overlap them. Scottish Natural Heritage (SNH) also includes Ramsar sites in its site condition monitoring programme.

UNESCO World Heritage Site

The Flow Country, covering about 4,000 km² of blanket bog in Caithness and Sutherland, is one of 13 sites on UK's 'Tentative List' of properties considered to be of outstanding universal value. Only properties on this list can be nominated for consideration for World Heritage status by UNESCO's World Heritage Committee.

<http://whc.unesco.org/en/tentativelists/5679/>

The Flow Country is widely considered to be the largest area of blanket bog in the world. Blanket bog is a globally rare habitat, confined to oceanic areas of mid-high latitudes. This site demonstrates remarkable diversity in response to altitude and longitude over relatively small distances, encompassing an exceptionally wide range of vegetation and surface pattern types, including numerous pool systems. It supports a wide range of wetland and moorland species, and in particular, many important bird species. These are typically northern species found here, towards the southern limit of their range, and include red-

throated diver, black-throated diver, golden plover, greenshank, golden eagle, merlin and short-eared owl. The area of Flow Country listed coincides with the Caithness and Sutherland Peatlands SAC.

Within the East Sutherland Deer Management Group there are:

18 X Sites of Special Scientific Interest (SSSIs) which fall partly or totally within the DMG. In total, 25,030 ha of land within the DMG is covered by SSSI designation, equivalent to 20% of the DMG area. Of these SSSIs, 9 are in broadly favourable condition, 7 are in recovering condition and 2 are currently assessed as having one or more designated features in unfavourable condition. In terms of area, 6192 ha or 25% of the total SSSI area is in favourable condition, 3193 ha or 13% is in recovering condition and 15780 ha or 63% is in unfavourable condition. The SSSIs in unfavourable condition are large blanket bog sites while those in recovering condition are mostly bog and woodland sites.

Overlapping the SSSIs are:

- Two Special Areas of Conservation (SAC): the Caithness and Sutherland Peatlands SAC and the River Naver SAC. Both of these extend beyond the area of East Sutherland DMG, but a total of 12,402 ha of land is designated as SAC within the DMG, equivalent to 10% of the area. In addition, 40 km of watercourses are also designated as SAC.
- Four Special Protection Areas (SPA): the Caithness and Sutherland Peatlands SPA, Strath Carnaig and Strath Fleet Moors SPA, Dornoch Firth and Loch Fleet SPA and Lairg and Strath Brora Lochs SPA. Of these, all but Lairg and Strath Brora Lochs SPA extend beyond the DMG boundaries. In total, 15,931 ha of land within the DMG is classified as SPA, or 13% of the total.
- Two Ramsar Sites: Caithness and Sutherland Peatlands and Dornoch Firth and Loch Fleet. Both of these extend beyond the boundaries of the DMG but together they cover a total area of 11,570 ha within the DMG, covering 9% of its area.
- One National Nature Reserve: Loch Fleet NNR is the only NNR within East Sutherland DMG. Only 235 ha of the reserve falls within the DMG boundaries, accounting for <1% of the DMG area.

Listed below is a summary of the individual designated sites within the area, in alphabetical order. All those sites with an SSSI designation are listed first, followed by sites carrying other designations only. Where only part of a designated site falls within the DMG area this is indicated as: (part). Colour coding denotes the status of designated features from unfavourable condition in red through to favourable condition in green (see Appendix 6 Monitoring of Designated Features).

Badanloch Bogs SSSI (part) - Recovering (bog)

Component of Caithness and Sutherland Peatlands SAC, SPA and Ramsar
Deer Management Unit: Badanloch

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=115

Badanloch Bogs SSSI is a two-part site located between Kinbrace and Syre. Only the southern part (96.7 ha) lies within East Sutherland DMG. The site was designated for its nationally important peatland habitat and breeding golden plover and greenshank populations. In addition, lying near the centre of one of the most extensive areas of blanket bog in the world, these features are also recognized internationally. Badanloch Bogs SSSI forms part of the Caithness and Sutherland Peatlands SAC, SPA and Ramsar site.

The blanket bog was monitored in 2004 and 2008. An extensive area of blanket bog vegetation in the southern section had lost most of its *Sphagnum* moss cover in 2004, causing peat erosion. The vegetation had not recovered by 2008 and deer trampling pressure was identified as a possible cause. The condition of the blanket bog feature on this site was therefore assessed as unfavourable in both 2004 and 2008.

The other features of this protected area, golden plover and greenshank, are both in favourable condition, with densities well above the average for the peatlands of Caithness and Sutherland when last surveyed. However, over-grazing has been identified as a potential pressure on these features.

SNH (March 2016) made the following comments: *“Parts of this site are affected by deer trampling. Recent monitoring shows some improvement. The main owner has agreed sympathetic deer management which should improve the condition of this bog habitat.”*

Ballinreach Coastal Gorges SSSI – Recovering (birch woodland)

Deer Management Unit: Kintradwell

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=128

Ballinreach Coastal Gorges SSSI is on the east coast of Sutherland between Brora and Loth and has been designated for its geological and woodland interests. The site occupies a narrow coastal strip of 8.1 ha and includes low coastal cliff outcrops of rock layers from the Jurassic Period. The geological feature was found to be in a favourable condition which requires the visibility and extent of the rock exposures to be maintained.

Birch woodland occurs over steeper ground and in shallow, steep sided gorges cross the site. These gorges provide shelter to plant species otherwise rare in east Sutherland. Eight species of native tree and a species-rich ground flora have been recorded on the site. A lack of tree seedlings and saplings was noted during the last survey, with grazing by sheep and rabbits thought to be limiting regeneration. However, as most of the trees are relatively young, this is not considered to be a significant problem at the moment.

SNH (March 2016) made the following comments: *“Bracken is the main issue affecting this protected area. Work is progressing well to resolve this management issue.”*

Ben Klibreck SSSI – Unfavourable (bog)

Deer Management Units: Clebrig, Altnaharra, FCS and Loch Choire

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=184

Ben Klibreck SSSI is centred around the isolated mountain Ben Klibreck, near Altnaharra. The 8,732 ha site is designated for its nationally important geology, alpine heath, blanket bog, lochs and woodland. It encompasses the full altitudinal transition from low ground to mountain summit and part of the site includes the headwaters of the River Naver which fall within the River Naver Special Area of Conservation (SAC), designated for Atlantic salmon and freshwater pearl mussel.

The high slopes and summits of Ben Klibreck support a range of alpine heath communities, including one of the most extensive examples of rare mountain azalea and alpine bearberry dwarf shrub vegetation in Britain. Although there was some concern over the amount of grass in parts of the alpine heath when surveyed in 2006, the alpine heath feature was considered to be in favourable condition.

The two largest lochs on the site (Loch Choire and Loch a' Bhealaich) are designated for being oligotrophic (nutrient poor) lochs with clear water and a high diversity of aquatic plants, including the nationally scarce awlwort. The oligotrophic loch feature is considered to be in favourable condition.

The lower slopes of Ben Klibreck are covered in a range of bog vegetation including the uncommon combination of western and eastern type blanket-mire vegetation communities and patches of a very local montane moss species which is confined to the Highlands. When surveyed in 2006, it was found that trampling by deer had created extensive areas of bare peat. Consequently the blanket bog feature was assessed as being in unfavourable, declining condition. Herbivore reviews of Clebrig and Loch Choire Estates conducted in 2015 suggest that the current stocking densities are “*in excess of supporting SSSI habitats*” (Patterson 2015a,b). An increased hind cull, particularly in areas identified as ‘trampled’, was suggested for both properties, together with a review of winter sheep grazing on Clebrig. Furthermore, cattle and wintering stags are contributing to localised trampling damage on low ground around Crask (FCS) and again, it was suggested that deer culls should be focused on trampled areas to help with habitat recovery (Patterson 2015c). Stocking rates of sheep and particularly cattle should be reviewed in tandem with an increased deer cull on FCS ground within the SSSI (Strath Caulaidh 2012).

Upland birch woods occur along the shores of Loch Choire and Loch a' Bhealaich while relict alder woodland is confined to the course of the Allt Coire na Fearna. These woodlands are a designated feature and when monitored in 2003, they were found to be fragmented, with locally heavy patches of over-grazing and suppression of tree regeneration by herbivores. However, since then a woodland scheme by Loch Choire Estate has allowed this feature to reach favourable condition.

Ben Klibreck SSSI is also designated for its Moine geology and is valuable for research into the origin of migmatites. The geological feature was found to be in favourable condition, with the rock outcrops visible and accessible, when monitored in 2008.

SNH (March 2016) made the following comments: “*The bog habitat is in unfavourable condition, and has been since 2006. Two estates have responded to make changes in their deer management to benefit the bog habitat. However, positive deer management is required by all estates to deliver sympathetic management.*”

Upland birch woodland is in recovering condition, as a result of a woodland scheme in 2011/12. The other features, moine (geology), oligotrophic loch, alpine heath, are all currently in good condition.”

Carrol Rock SSSI – Recovering (birch woodland)

Deer Management Unit: Dunrobin (Sutherland Estates)

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=330

Carrol Rock SSSI is a 133 ha site, designated for its upland birch woodland which occurs on block scree below Carrol Rock, along the SW shore of Loch Brora. It is a mature birch-*rowan* woodland with bird cherry, hazel, willow, some aspen and oak. Pressures on the site include the spread of beech, a non-native species in the Highlands, and, formerly, over-grazing, primarily by deer. However, good tree regeneration is occurring since fencing and the site is now considered to be recovering.

SNH (March 2016) made the following comments: *“All the birch woodland is now protected by a deer fence, as part of a new woodland scheme (2015). However, roe deer are getting through existing fences, so deer control will still be required to assist long-term recovery.”*

Coir an Eoin SSSI - Recovering (bog)

Component of Caithness and Sutherland Peatlands SAC, SPA and Ramsar
Deer Management Unit: Balnacoil Estate (Kildonan & Gordonbush adjacent)
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=385

Coir' an Eoin SSSI is a 2555 ha peatland site located north of Balnacoil and north-west of Brora. It has been designated for its nationally important blanket bog and the breeding population of golden plover and is also internationally recognized as part of the Caithness and Sutherland Peatlands SAC, SPA and Ramsar sites.

In addition to widespread and common bog vegetation species, the absence of regular, severe burning means that dwarf birch, small cranberry, hummock-forming rusty bog-moss and, the nationally scarce, Austin's bog-moss are all well represented on the site. Localised trampling by red deer, causing disturbed bare peat, has been identified as a problem in the past. However, intensified deer control has enabled recovery and the condition of this feature in 2009.

Golden plover bred on Coir' an Eoin SSSI at densities well above the average for Caithness and Sutherland during the 1990s. Since then, breeding densities have declined although the reason is unclear. External factors associated with the wintering grounds in milder, coastal areas may be involved.

SNH (March 2016) made the following comments: *“The estate has responded to past monitoring results, helping to reduce localised deer trampling pressure on bog habitat. It will be important to continue this to prevent this habitat slipping back into declining condition.”* (June 2016) – *“the main estate responded well to past monitoring results. However, survey work in May 2016 indicates that the condition of the bog has deteriorated in places. It will be important to review deer management on and adjacent to this site in an effort to reduce deer trampling. Trampling has been noted within the SSSI adjacent to Kildonan Estate, in addition to trampling on Balnacoil ground.”*

Creag na Croiche SSSI – Recovering (moine geology)

Deer Management Unit: Tressady
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=458

Creag na Croiche SSSI is near Rogart. It is a small hill site of 35 ha which has been designated for its outcrops of moine rocks which form part of the 'Rogart pluton'. Tree planting has occurred on the site although this is compatible with the geological interest as long as outcrop visibility and access are maintained, on-going vegetation control is required.

SNH (March 2016) made the following comments: *“Scrub control (mainly gorse) was undertaken in early 2016 by the crofting tenant to benefit the visibility/accessibility of this important rock sequence.”*

Dunrobin Coast SSSI – Favourable (multiple geology)

Deer Management Unit: Dunrobin (Sutherland Estates)

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=573

The Dunrobin Coast SSSI lies along the shoreline by Dunrobin Castle near Golspie, between the high and low water marks. The 5 ha site was designated for its exposed Lower Jurassic sedimentary rocks which contain animal and plant microfossils. SNH made the following statement in March 2016: “*this protected area supports three geological features, all of which are currently in good condition and not affected by deer management.*”

Garbh Allt SSSI – Favourable (birch woodland)

Deer Management Unit: Gartymore (Sutherland Estates)

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=669

Garbh Allt SSSI is located near Helmsdale. The 5.5 ha site is designated for its nationally important upland birch woodland which grows in the short but deep gorge cut by the Garbh Allt burn. It is a mixed deciduous woodland with species-rich flushes and thriving fern and moss communities, including fox-tail feather-moss which occurs in the spray zone.

The birch woodlands were found to be in favourable condition when last monitored, but that was in 2001. At that time, there was evidence of some grazing by deer in the more accessible areas and dense bracken growth in the open areas was thought to be suppressing regeneration. SNH have recently (March 2016) stated that “*although in favourable condition, there are pressures from roe deer, scrub, bracken and non-native species (sycamore).*”

Helmsdale Coast SSSI (part) – Favourable (multiple geology)

Deer Management Units: Craik & Gartymore (Sutherland Estates)

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=772

Helmsdale Coast SSSI consists of 5 sites, 4 of which are located within East Sutherland DMG along the coast between Helmsdale and Brora. Together these 4 sites have an area of 113.4 ha. Much of the site, which is nationally important for its late Jurassic period geological features, including Kimmeridgian rock exposures and fossilised plants, lies in the intertidal areas. SNH have recently (March 2016) stated that “*this protected area supports coastal geological features, all of which are currently in good condition and not affected by deer management.*”

Helmsdale Coast SSSI partly overlaps Moray Firth SAC, East Caithness Cliffs SAC and SPA, and Berriedale Cliffs SSSI, designated for a number of sea bird breeding colonies, the bottlenose dolphin population, subtidal sandbanks and vegetated sea cliffs.

Inverbrora SSSI – Favourable (multiple geology)

Deer Management Unit: Dunrobin (Sutherland Estates)

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=812

Inverbrora SSSI consists of three sites with a total area of 58.3 ha. Two of the sites are on the banks of the River Brora, the other is on the foreshore near the outflow of the River Brora. This SSSI is designated for its nationally important exposures of Jurassic rocks and fossil plant remains. SNH have recently (March 2016) stated that “*this protected area supports a range of geological features, all of which are currently in good condition and not affected by deer management.*”

Lairg & Strath Brora Lochs SSSI & SPA – Favourable (black-throated diver)

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8104

<http://jncc.defra.gov.uk/default.aspx?page=1875>

Deer Management Units: Dalreavoch (Sutherland Estates), FCS, Challenger, Highfield Forestry, Brook Forestry & Fountains Forestry.

Lairg and Strath Brora Lochs SSSI consists of 8 freshwater lochs located north-east of Lairg. Together their area is 286.3 ha. These lochs have been designated for their nationally and internationally important population of breeding black-throated divers. Given the international importance of the divers, the Lairg and Strath Brora Lochs SSSI has also been classified as an SPA. The lochs lie in two distinct clusters, one on hill ground adjacent to conifer plantations in the south of the DMG, the other in more remote upland peatland terrain to the north of Strath Brora. Two of the lochs fall within the overlapping Strath Carnaig and Strath Fleet Moors SPA and SSSI, designated for hen harrier.

SNH (March 2016) made the following comments:

“Pressures are present through recreational disturbance, forestry management and natural predation. However, this feature is currently in good condition and not affected by deer management.”

Loch Fleet SSSI & NNR (part) – Recovering (pine woodland)

Component of Dornoch Firth and Loch Fleet SPA

Deer Management Unit: Dunrobin (Sutherland Estates).

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=984

Loch Fleet SSSI is a coastal site just south of Golspie, and is the most northerly inlet on the east coast of mainland Britain. Loch Fleet SSSI forms part of Dornoch Firth and Loch Fleet SPA and Ramsar site and a large part of the SSSI lies within Loch Fleet National Nature Reserve (NNR). The site is designated for its extensive saltmarsh, sandflat, eelgrass beds and sand dune habitats which support internationally important numbers of wintering birds and nationally important numbers of wintering eider. Its breeding bird assemblage, pinewood and vascular plant assemblage are also designated features. As a NNR, public access is promoted at Loch Fleet. About 232 ha of the SSSI falls within the DMG area.

The sandflats and saltmarsh habitats are considered to be in favourable condition while sand dune habitats are in unfavourable condition due to encroachment of gorse and tree saplings causing gradual modification of the dune system. The condition of the eelgrass beds has been declining since 2007 and is now considered unfavourable due to smothering growth of fibrous algal mats which is reducing their extent.

The pine woodland feature includes two Scots pine plantations on the site of an old native pinewood. The original pinewood ground flora survives in some areas and supports a number of scarce pinewood species and impressive lichen-rich lawns, which are sensitive to trampling. The woods have an unnatural age structure with only pockets of natural pine regeneration. Deer browsing has damaged some of the regenerating Scots pine and rowan trees. Control of non-native species, including spruce, rhododendron, gorse, cotoneaster, sycamore and beech is also required. As such the condition of the pinewood feature was

considered unfavourable recovering when monitored in 2005.

The pinewood ground flora includes nationally-scarce species such as creeping ladies' tresses and twinflower. These, together with other nationally-scare saltmarsh species such as sea centaury contribute to the vascular plant assemblage feature which was found to be in favourable condition when monitored in both 2005 and 2012.

The breeding bird assemblage at Loch Fleet includes a wide range of coastal and woodland species. This feature was found to be in favourable, although declining condition when monitored in 2008. The cause of decline, and whether or not it was due to human disturbance or external factors, was not clear. Similarly, the wintering eider population was considered to be in unfavourable condition when monitored in February 2001 but SNH stated in March 2016 that: "*bird features have improved over the last five years and are currently in good condition.*"

SNH (March 2016) made the following other comments: "*Deer browsing and non-native species are the main pressures on the pine woodland. The estate has committed to reduce and maintain a low deer density (i.e. fewer than 6 deer per km²) at Loch Fleet SSSI. This will reduce deer browsing pressure on saplings, and bring the site into 'recovering' status. Baseline tree monitoring plots are established to assess the condition of saplings and help verify woodland deer density. Deer Vehicle Collisions of roe increased in 2015 on the Littleferry road in proximity to this protected area.*

Sand dune habitat and eelgrass beds (intertidal) are both in unfavourable condition, but these are largely unaffected by deer."

The Dornach Firth and Loch Fleet SPA has an area of 7836 ha, covering the two northernmost estuaries of the Moray Basin ecosystem.

https://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8490

The area is designated for its non-breeding (wintering) populations of the following waders and wildfowl species: Bar-tailed godwit (*Limosa lapponica*), Curlew (*Numenius arquata*), Dunlin (*Calidris alpina alpina*), Greylag goose (*Anser anser*), Oystercatcher (*Haematopus ostralegus*), Teal (*Anas crecca*) and Wigeon (*Anas penelope*). In addition it provides important foraging grounds for nationally important numbers of Osprey (*Pandion haliaetus*). All these features are considered to be in favourable condition.

Loth Gorge SSSI – Favourable (birch woodland)

Deer Management Units: Kintradwell & Crakaig

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1102

Loth Gorge is a 12.6 ha site northeast of Brora, designated for its nationally important birch woodland which is found on the steep slopes of the Loth Burn gorge. The woodland is mixed deciduous, dominated by downy birch but with notable stands of hazel, goat willow and rowan. There are moist, shaded woodland conditions within two ravines which have a rich ground flora of ferns and mosses.

When the site was surveyed in 2008, the woodland feature was considered to be in favourable but declining condition, with over-grazing and encroachment of gorse identified as potential pressures. There were relatively few young trees and saplings, thought to be limited by deer and sheep browsing. Since then, SNH (March 2016) has stated that: "A new

woodland scheme (completed c. 2013) has addressed deer browsing pressure, scrub and bracken issues. Both estates worked to develop the woodland scheme which has also reduced deer vehicle collisions (a previous hot-spot) on the A9 trunk road.”

Mallart SSSI – Unfavourable declining (bog)

Component of Caithness and Sutherland Peatlands SAC, SPA and Ramsar site

Deer Management Unit: Loch Choire (Clebrig adjacent)

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1124

Mallart SSSI lies between Altnaharra and Kinbrace. This 561.8 ha site is designated for its nationally important blanket bog which is also a part of the internationally recognised Caithness and Sutherland Peatlands SAC, SPA and Ramsar sites. Mallart River, which flows along the eastern and southern boundaries of the site, is also part of the River Naver SAC, which is of conservation interest for its populations of Atlantic salmon and freshwater pearl mussel.

Most of the site is covered by peat of varying depths depending on the slope of valley side mires. The bog vegetation has a diverse range of bog moss species including the nationally-scarce *Sphagnum austinii* and white beak-sedge *Rhynchospora alba*, which is typical of bog in the west and centre of Sutherland and is locally common in pool areas. Mallart SSSI also supports upland and breeding wading bird populations, as well as otters.

The blanket bog was last monitored in 2000 when it was found to be in favourable condition. Given how long ago this was, SNH (March 2016) have said: *“Although favourable, this site has still to be surveyed using the approved bog monitoring methodology. Bog sites either side of Mallart (i.e. Ben Klibreck and Truderscaig) show deer pressure from trampling and browsing. Future survey visits will help determine the condition of the bog habitat on this protected area. Monitoring in May 2016 now suggests this area is in an Unfavourable Declining condition, a significant deterioration on the previous Favourable condition in 2000. (SNH June 2016) “Recent Site Condition Monitoring (May 2016) has found this site to be in poor condition. Parts of the site are being affected from excessive deer trampling. Reviewing deer management and identifying appropriate cull targets should help to reduce impacts. “*

Skinsdale Peatlands SSSI – Unfavourable (bog & scarce plants)

Component of Caithness and Sutherland Peatlands SAC, SPA and Ramsar site

Deer Management Units: Balnacoil, Ben Armine (Sutherland Estates), Borrobol, Loch Choire, with a small part of Badanloch.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1439

Skinsdale Peatlands SSSI is a large (7048 ha) peatland site on a remote plateau around the headwaters of the River Brora between Lairg and Kinbrace. It is the largest peatland SSSI in East Sutherland, designated for its blanket bog habitat, scarce plants and peatland breeding birds, including nationally important dunlin, golden plover and greenshank populations. This site is also part of the internationally recognised Caithness and Sutherland Peatlands SAC, SPA and Ramsar sites.

The peatland habitat is diverse, with a range of bog types and species, and extensive carpets of *Sphagnum* bog mosses. The condition of the blanket bog on this site has been deteriorating since 2000, largely due to deer trampling, and this feature is now considered to be in unfavourable condition. In March 2016, SNH commented that *“this is a large site with*

multiple estate interests. One estate has a Moorland Management Plan which aims to benefit the bog habitat. To improve the condition of the bog will require input from the other main landowners.”

The designated vascular plant assemblage at Skinsdale Peatlands SSSI includes seven nationally scarce species. These are dwarf birch and small cranberry which occur within the mire communities, alpine bearberry, pyramidal bugle, creeping ladies tresses and downy willow which grow on drier heaths and awlwort, a small aquatic plant occurring in Gormloch Beag. The vascular plant assemblage was considered to be in unfavourable condition when monitored in 2013 with over-grazing identified as a potential pressure. Degradation of specialised sphagnum lawn habitats by deer trampling may be causing a decline in small cranberry. Otherwise, SNH commented in March 2016 that *“most scarce plants are in good condition on the site. However, mountain willow may be in long-term decline. Vertical crags/cliffs make surveying this willow very difficult. Specialised surveyors, using ropes, are planning to assess the presence/condition of this scarce willow in 2016. This willow only grows on inaccessible ledges where deer cannot reach.”*

The peatland breeding birds and waders at the site are currently all in good condition, although trampling by deer is a potential pressure on ground nesting bird populations.

Strath Carnaig & Strath Fleet Moors SSSI & SPA (part) – Favourable declining (hen harrier)

Deer Management Units: Tressady, Lairg, Challenger, Highfield Forestry, Brook Forestry & Fountains Forestry.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=9188

Strath Carnaig and Strath Fleet Moors SSSI consists of two upland moorland sites between Dornoch and Lairg. One of these, on the north side of Strath Fleet (4952 ha), falls within the area of East Sutherland DMG. The site is designated as both an SSSI and SPA because of its national and international importance for breeding hen harriers *Circus cyaneus*. The Strath Fleet part of the site overlaps two of the lochs designated within the Lairg & Strath Brora Lochs SSSI and SPA for breeding black-throated divers.

The condition of the breeding hen harrier population was last monitored in 2013 when it was considered to be favourable. More specifically SNH (March 2016) commented: *“The hen harrier population is currently favourable. However, this protected area has pressures from loss of open hill ground habitat. Further large scale loss could potentially impact foraging habitat for hen harrier. Deer are not considered a notable issue for SSSI management at this current time.”*

Strathfleet SSSI – Favourable (vascular plants); Recovering (oak woodland)

Deer Management Unit: Morvich Estate

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1491

Strathfleet SSSI is located on the steep slopes around Morvich, south-east of Rogart. The 133.9 ha site has been designated for its nationally important moine rock outcrops, upland oak woodland and range of scarce flowering plants.

The site is important for its structural and metamorphic geology and the impacts of pluton formation on the surrounding rock can readily be seen here. When last assessed in 2011, the geological features were found to be in favourable condition.

The oak woodland at the site is the most northerly oak wood of significance in eastern Scotland. It supports some impressive veteran oaks and a good range of woodland species typical of this habitat type, including a variety of lichens growing on tree branches and high stems. However, non-native rhododendron, laurel and conifers detract from the naturalness of the SSSI. When monitored in 2010, the condition was assessed as recovering. SNH (March 2016) commented: “*Woodland monitoring in 2010 showed sapling damage by deer to be very low. Bracken growth was considered to be in excess of acceptable levels. Additional survey showed positive tree regeneration, and a commitment for bracken control to be taken forward by owner.*”

Strathfleet SSSI supports a nationally important assemblage of plant species due to the varied underlying rock and soil types. Species of particular note are the nationally rare rock cinquefoil *Potentilla rupestris*, known to exist at only one other site in Scotland, rock whitebeam *Sorbus rupicola* and pyramidal bugle *Ajuga pyramidalis*. The populations of all three species are relatively small but, in March 2016, SNH stated that: “*scarce plants were considered in good condition in May 2012, with rabbits and wild goats being the main herbivore pressure.*”

Truderscaig SSSI – Favourable (bog)

Component of Caithness and Sutherland Peatlands SAC, SPA and Ramsar site

Deer Management Unit: Badanloch & Loch Choire

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1567

Truderscaig SSSI is a 1072 ha upland site between Altnaharra and Kinbrace. It has been designated for its internationally important blanket bog and breeding upland birds, particularly greenshank. The site is part of Caithness and Sutherland Peatlands SAC, SPA and Ramsar sites. It also forms part of the catchment of the River Naver which has internationally important populations of Atlantic salmon and freshwater pearl mussel, protected within the River Naver SAC.

A variety of peatland types occur across the site and, in addition to typical blanket bog species, the hummock forming species rusty bog-moss *Sphagnum fuscum* and the nationally scarce Austin’s bog-moss *Sphagnum austinii* are frequent in areas where there has been little burning. Nationally scarce dwarf birch and alpine bearberry also occur on this site. The blanket bog feature was considered to be in favourable condition when last monitored in 2009, although deer browsing pressure was noted in one part of the site. In March 2016, SNH commented that: “*The estate managing the ground where the main deer impacts were previously noted, have agreed to reduce deer density to alleviate impacts.*”

The breeding bird assemblage at Truderscaig SSSI includes wood sandpiper which is a very rare breeding species in UK, black-throated diver, dunlin, merlin, red grouse and wigeon, as well as high densities of greenshank. Both the diversity of breeding birds and the breeding greenshank population were considered to be in favourable condition when last monitored.

River Naver SAC

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8362

<http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030260>

The River Naver Special Area of Conservation extends to 1,067 ha. Of this, the part that falls within East Sutherland DMG includes Loch Choire, River Mallart, Loch Naver and

River Naver. The site was designated for two Annex II qualifying species, Freshwater pearl mussel (*Margaritifera margaritifera*) and Atlantic salmon (*Salmo salar*). Freshwater pearl mussel was assessed as unfavourable, no change, in 2003, while the salmon population was assessed as in favourable, recovered condition following monitoring in 2011.

Caithness and Sutherland Peatlands Ramsar

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8412

<http://jncc.defra.gov.uk/pdf/RIS/UK13003.pdf>

The Caithness and Sutherland Peatland Ramsar designation covers 143,503 ha in North Scotland of which 11,335 ha falls within the East Sutherland DMG area. It covers four qualifying features, three of which have been assessed. The breeding bird assemblage and the dunlin (*Calidris alpina schinzii*) breeding were both assessed in 2009 as Favourable maintained. Blanket bog was assessed in 2010 as Unfavourable declining. Greylag goose (*Anser anser*) breeding has not been assessed.

All or part of the following SSSIs overlap with the Ramsar designation: Badanloch Bogs, Coir' an Eoin, Mallart, Skinsdale Peatlands and Truderscaig. Within these sites, blanket bog habitats under SSSI and SAC designations range from Unfavourable declining to Favourable maintained status.

The Ramsar designated area overlaps with the Caithness and Sutherland Peatlands SPA and SAC.

Caithness and Sutherland Peatlands SAC

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8218

<http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0013602>

Caithness and Sutherland Peatlands Special Area of Conservation (SAC) extends to 143,539 ha in North Scotland and 11,335 ha within East Sutherland DMG. The eight qualifying interests of the SAC include Blanket bog, Depressions in peat substrates, Otter, Acid peat-stained lakes and ponds, Wet heathland with cross-leaved heath, Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels, Marsh saxifrage (*Saxifrage hirculus*) and Very wet mires with unstable "quaking" surface.

Three of these qualifying features, Blanket bog, Depressions in peat substrates and Wet heathland with cross-leaved heath were assessed in 2010 as Unfavourable declining. A further feature, the otter population, was assessed as being in Unfavourable, declining, condition in 2011. All other features are considered to be in favourable condition.

The site overlaps with the Caithness and Sutherland Peatlands SPA and Ramsar sites.

The boundaries of the SAC and SPA includes all or part of 5 peatland SSSIs within East Sutherland DMG area: Badanloch Bogs, Coir' an Eoin, Mallart, Skinsdale Peatlands and Truderscaig. As with the Ramsar classifications, the SSSI designated blanket bogs within these sites range from Unfavourable Declining to Favourable Maintained.

Caithness and Sutherland Peatlands SPA

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8476.

<http://jncc.defra.gov.uk/default.aspx?page=1855>

Caithness and Sutherland Special Protection Area (SPA) extends to 145,517 ha in North Scotland and 11,335 ha within East Sutherland DMG. The SPA qualifying species includes internationally important populations of dunlin (*Calidris alpina schinzii*), as well as nationally important populations of red-throated diver (*Gavia stellata*), black throated diver

(*Gavia artica*), hen harrier (*Circus cyaneus*), golden eagle, merlin (*Falco columbarius*), golden plover (*Pluvialis apricaria*), wood sandpiper (*Tringa glareola*), greenshank (*Tringa nebularia*), wigeon (*Anas penelope*), common scoter (*Melanitta nigra*) and short-eared owl (*Asio flammeus*).

Of these qualifying species, populations of black throated diver and golden plover were assessed as being in Unfavourable declining condition in 2007 and 2009 respectively. All other species are listed as Favourable Maintained, except short-eared owl and wigeon which have not been assessed.

The site overlaps with the Caithness and Sutherland Peatlands SAC and Ramsar sites, as well as part of the River Naver SAC.

REFERENCES:

Patterson, D. 2015a. Clebrig Estate herbivore review - Ben Klibreck Site of Special Scientific Interest (SSSI). SNH, March 2015

Patterson, D. 2015b. Loch Choire Estate herbivore review - Ben Klibreck Site of Special Scientific Interest (SSSI). SNH, July 2015

Patterson, D. 2015c. FCS/Crask herbivore review - Ben Klibreck Site of Special Scientific Interest (SSSI). SNH, July 2015

Strath Caulaidh 2012 Deer population and impact assessment for FC land within the Ben Klibreck SSSI, Sutherland, UK. Report to Forest Enterprise Scotland, February 2012