

NORTH WEST SUTHERLAND DEER MANAGEMENT GROUP

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DESIGNATED SITES

Appendix 3

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THE DESIGNATED SITES IN THE NW SUTHERLAND DMG AREA

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

Sites of Special Scientific Interest (SSSI)

Special Area of Conservation (SAC)

Special Protection Area (SPA)

National Scenic Area (NSA)

Ramsar Site

In addition, 100,686 ha or 59% of the DMG area has recently been classified as “Wild Land Areas”, 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.

There are no National Nature Reserves or National Parks within the area.

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 31 March 2008, there were 1,456 SSSI’s, 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. Together with SACs, Special Protection Areas are designated under the European Wild Birds Directive which forms 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 Special Protection Areas (SPAs) or Special Areas of Conservation (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.

National Scenic Area

National Scenic Areas are Scotland's only national landscape designation. They are those areas of land considered of national significance on the basis of their outstanding scenic interest which must be conserved as part of the country's natural heritage. They have been selected for their characteristic features of scenery comprising a mixture of richly diverse landscapes including prominent landforms, coastline, sea and freshwater lochs, rivers, woodlands and moorlands.

There are currently 40 NSA's in Scotland, covering a total land area of 1,020,500 ha and a marine area of 357,900 ha.

Within the North West Sutherland Deer Management Group there are:

- Twenty-six Sites of Special Scientific Interest (SSSIs) totalling 71,582 ha or 42% of DMP area. Out of these SSSIs, six are currently assessed as being in broadly unfavourable condition, seven are in recovering condition and thirteen are in favourable condition. In terms of broad area, 17,863 ha or 25% of the total SSSI area is in Favourable condition, 23,369 ha or 33% is in Recovering Condition and 30,463 ha or 42% is in Unfavourable condition. It is anticipated that a considerable proportion of this latter area will move to Recovering condition within the next year or so and on the remainder, the “Unfavourable” assessment often relates to only part of the overall site or a single designated feature. The majority of the SSSIs in unfavourable and recovering condition are notified for the following features: Birch Woodland, Blanket Bog, Breeding Bird Assemblage and Upland assemblage, including wet and dry heaths as well as montane communities.
- Overlapping with the SSSIs are:
 - Six Special Areas of Conservation (SACs) totalling 17,844 ha plus one SAC covering large areas of peatland in Caithness and Sutherland totalling 143,538 ha. In total, there are 58,417 ha of land designated as SAC within the DMG, or 34% of the total. In addition, 71 km of watercourses are also designated as SAC.
 - One Special Area of Conservation (SPA) extending to 20,182 ha and one SPA covering large areas of peatland in Caithness and Sutherland totalling 145,517 ha. In total, 64,308 ha is classified as SPA within the DMG, or 38% of the total.
 - One Ramsar Site covering large areas of peatland in Caithness and Sutherland totalling 143,502 ha, of which, 40,565 ha is situated within this DMG, covering 24% of the area
 - Two National Scenic Areas totalling 39,000ha.

Listed here is a summary of the individual designated sites within the area, in alphabetical order. All those sites with an SSSI designation are listed first, following by sites carrying the other designations only.

Aird Torrisdale SSSI Favourable

Deer Management Units: Tongue North (31)

Aird Torrisdale Site of Special Scientific Interest (SSSI) is located on the north coast of Sutherland, 3km west of Bettyhill. The 135 ha site is designated for its nationally important Moine geology. As such, there is little relevance to deer management.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=24

Altnaharra SSSI Favourable

Deer Management Units: Altnaharra (41)

Altnaharra Site of Special Scientific Interest (SSSI) is close to the village of Altnaharra in central Sutherland. The 68.89ha site is the most extensive and most varied acidic mire in north and west Sutherland. In recognition of this, the site has been designated as both of national and international importance for the wetland vegetation. This site is also of national importance as it is one of only two places in the UK where string sedge has been found.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=52

The site overlaps part of the River Naver SAC, which is of international importance for Atlantic salmon and freshwater pearl mussel. Deer impacts upon the site are considered to be within acceptable ranges.

A'Mhoine SSSI/ SPA/ SAC/ Ramsar Unfavourable

Deer Management Units: Hope (26), Melness (27), Melness Crofters Estate (28), Kinloch (25)

A' Mhoine Site of Special Scientific Interest (SSSI) is an extensive area (5,964 ha) of blanket bog that lies across the watershed separating the Kyle of Tongue from Loch Hope and Loch Eriboll in North Sutherland. The site is nationally and internationally important for its blanket bog habitat and the breeding birds that this habitat supports. The populations of dunlin, golden plover and greenshank are of particular importance because these birds breed on A' Mhoine SSSI at high densities.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1

The condition of the blanket bog habitat was monitored in 2011 and found to be in unfavourable declining condition. An uncontrolled fire in April 2007, "... started off the site, damaged approximately 220ha of blanket bog on the eastern side of A' Mhoine SSSI. The fire appeared to have spread quickly and did not burn into the Sphagnum, but recovery may still take many years." (SNH Management Statement, 2009). The site was deemed to be in Favourable maintained condition in 2002. There have been significant improvements with both dunlin and Golden Plover populations since 2004.

The large populations of dunlin, golden plover and greenshank were assessed in 2009. Dunlin and golden plover populations were assessed as favourable recovered. The population of greenshank as well as the breeding bird assemblage was assessed as favourable maintained in 2009 and 2004 respectively.

The nationally important peatland habitat and associated breeding birds designated features of A' Mhoine SSSI form part of the qualifying features for the Caithness and Sutherland Peatlands SAC, the Caithness and Sutherland Peatlands SPA and Caithness and Sutherland Peatlands Ramsar site.

SNH (January 2015) make the following comments:

“ Very high levels of trampling recorded. Exposed site where previous burning has also damaged peatland vegetation. Both deer and sheep present on site, though sheep mainly confined to the north. Will take a long time to recover. Assured management now in place on major ownership which will allow recovery in the long term. Management of northern portion still to be agreed with crofters. As and when this is secured, the whole site can be considered recovering.”

Bad na Gallaig SSSI/ SPA/ SAC/ Ramsar Recovering

Deer Management Units: Syre (38), North Lochnaver (39), Loyal (28)

Bad na Gallaig Site of Special Scientific Interest (SSSI) is located in central Sutherland, 2km northeast of Altnaharra. The 4,717 ha site is of national importance for the extensive area of blanket bog habitat and for the populations of upland breeding birds.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=113

“Monitoring of the blanket bog took place in summer 2006. A fire, started off the site, had spread into its southwest corner, damaging the blanket bog vegetation. Trampling damage by deer was also recorded as high at a single sampling point within the burnt area. The blanket bog was assessed as unfavourable due to the fire damage, though the remainder of the site appeared to be in good condition with a high water table and plant species characteristic of this habitat recorded. Measures have been taken to minimize the risk of future fires, and it is hoped the blanket bog will recover, though this may take many years.” (SNH Management Statement, 2009).

The diversity of bird species and the suitability of most of the moorland habitat for breeding birds led to the breeding bird assemblage being assessed in 2006 as being in favourable maintained condition.

The blanket bog and breeding bird assemblage on Bad na Gallaig SSSI has been internationally recognized and forms part of the Caithness and Sutherland Peatlands SAC, part of the Caithness and Sutherland Peatlands SPA and part of the Caithness and Sutherland Peatlands Ramsar site.

The headwaters of the River Naver form within this site and are part of the spawning grounds of the river's Atlantic salmon (*Salmo salar*) population. The salmon population is of international conservation importance as part of the River Naver SAC which is designated for Atlantic salmon and freshwater pearl mussel. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8362

SNH (January 2015) make the following comments:

“ Burning caused initial “unfavourable” assessment. Sheep and deer trampling noted on burnt ground. Considered likely to recover with present management provided no further burning or significant increase in grazing animals”.

Ben Hope SSSI Unfavourable

Deer Management Units: Strathmore East (24), Kinloch (25), Hope (26)

Ben Hope Site of Special Scientific Interest (SSSI) is located between Hope and Altnaharra http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=182. The 3,033 ha site is designated for its geology, upland habitats, birch woodland and rare plants, and encompasses the mountain of Ben Hope at 927m. This is an extremely diverse site with a wide altitudinal range and a wide variety of vegetation types.

The lower and middle slopes of Ben Hope have a mosaic of upland habitats including wet heath and blanket bog vegetation. The birch woodland (consisting of three fragments Leitir Mhuiseil, Creag na garbh-baid and Merkan) is located on the lower slopes and cliffs of Ben Hope at altitudes up to 220m ASL. The woods are amongst the best examples of native woodland in north Scotland with a diverse woodland field layer. Bands of calcareous hornblende-schist rocks exposed on the western cliffs of Ben Hope support many notable montane plants.

The birch woodland was last monitored in 2009 and assessed as Unfavourable – no change. The main adverse impact on the birch wood identified was overgrazing by herbivores, particularly wild deer, and their impact on tree and shrub regeneration.

SNH commissioned a detailed woodland survey in 2010 to profile the current structure of the woodland on Ben Hope, assess the extent of herbivore and other impacts on the woodland and review the current situation, including existing conservation management measures, in relation to the site's Conservation Objectives.

“The woodland profile results showed that Leitir Mhuiseil and Creag na garbh-baid woods were dominated by mature birch and possessed an aging and declining population with no recent recruitment. The age structure of Merkan wood was more diverse as a result of a few patches of birch regeneration that became established some 25 years ago but there has been no successful establishment since that time.” (Mackenzie & Clifford, 2010).

Browsing by deer and livestock (mainly sheep) was severe on all species of seedlings and on the epicormic/basal shoot growth of the larger broadleaf trees and was the principal causal factor for the unfavourable condition of the Ben Hope woodlands.

The browsing evidence indicated that the majority of the impact occurred prior to the 2010 growing season, with few current season's leader growth of seedlings as well as basal shoots browsed at the time of the survey (June). They suggested that browsing took place either during the previous winter months, in early spring 2010 or in the late summer or autumn of 2009.

Mackenzie and Clifford were unable to ascertain whether deer or sheep were the main browsers as both the trails and signs of deer and sheep were widespread in and around most unenclosed woodland areas. They concluded that as deer density was moderately high and there are only limited areas of woodland available as shelter in the glen, deer are likely to have a disproportionate impact on native woodland. Whilst they also noted signs of cattle in a few areas as well as roe deer they concluded their impact was less significant.

Whilst the presence of bracken was noted at high density in several plots they also recorded the presence of seedlings in these plots. Mackenzie and Clifford therefore concluded :

“It is unlikely that bracken would prevent the woodland achieving its conservation objectives, provided the level of herbivore browsing was reduced. Bracken control should not therefore be necessary.”

“Without reductions in browsing levels and an expansion in the area of established regeneration of all tree and shrub species the risk to the conservation of objectives will be continued canopy decline, which will lead to further fragmentation, isolation of stands and eventual possible disappearance of the woodland.” (Mackenzie & Clifford. 2010).

Sixteen rare montane plant species were monitored in summer 2004. For ten of the sixteen species, populations were large enough to be viable; however there were only small populations of six species. This SSSI feature was assessed as being in unfavourable declining condition due to the decline in mountain sandwort and lack of regeneration by rock whitlowgrass.

“Current grazing levels are not thought to have caused the reduction in the mountain sandwort population or the lack of flowering by rock whitlow”. (SNH Management Statement 2008)

During the summer of 2010, SNH commissioned an assessment of the condition of the Upland Assemblage feature on Ben Hope SSSI as part of SNH’s national programme of Site Condition Monitoring. The report details the change in impacts for these habitats since the previous assessment in 2004.

“The upland assemblage feature on Ben Hope is made up of five component habitats: subalpine dry heath, blanket bog, wet heath, montane acid grassland and alpine heath. Of these five habitats, two failed to meet SCM targets: subalpine dry heath and wet heath, and the feature was found to be in unfavourable declining condition. Failures were due to an absence of key indicator species, herbivore trampling and bracken encroachment.” (Maier, R. 2012).

The report found that herbivore impacts vary across the site. Trampling impacts were mostly higher than grazing impacts especially for wet heaths and montane communities. However both types of impacts had increased in varying proportions since 2004.

“The highest trampling impacts were in An Gorm-choire, around Creag Riabach Mhor and in the blanket bog and wet heaths in the south-eastern part of the site. Higher grazing impacts were scattered across the site.” (Maier, 2012).

For montane communities, trampling impacts were assessed as having increased on the slopes to the south of the Ben Hope summit. The increased impacts in montane habitats on the Ben Hope summit were likely to be due to the presence of sheep as well as deer in this area.

Blanket bog in the northern and western part of the site was found to have generally low impacts. However localized higher trampling impacts, especially in An Gorm-choire and the southeast it was concluded could lead to a deterioration in the condition of the blanket bog feature. Grazing impacts on dry heath had increased in most areas, but trampling impacts had only increased very locally. Despite the increases, current grazing impacts were assessed as still largely Moderate or lower with trampling decreased to Low especially in An Garbh-choire and the southern part of the site.

NW Sutherland Deer Management Group

Designated Sites

The amount of dung recorded for all habitats in both 2004 & 2011 had increased. Moderate, High-Moderate and High dung impacts were found in all parts of the Ben Hope SSSI, but they were clustered on the Ben Hope summit ridge and in the eastern corries, especially An Garbh-Choire and An Gorm-Choire.

The main herbivores at the site are red deer, though small numbers of sheep are present in different parts of the site. The highest numbers of deer were seen in the south-eastern part of the site. Deer were also seen on Sail Romascaig and Creag Riabhach and there were small numbers grazing the grassland patches below Leitir Mhuisseil. Sheep were only observed at higher altitude in small numbers.

SNH (January 2015) make the following comments:

“ Sheep removed from west part of site in 2011. SRDP contract for open ground features now in place over this ownership. Assured management in place over the other. Measures currently in place will result in recovery of all open ground features in the long term. While the northern outlier of woodland interest is recovering, the major woodland to the south requires further action. Work towards this is ongoing. As and when these management measures are in place, this site can be considered recovering.”

The wider area is one of great natural beauty and the SSSI lies within the Kyle of Tongue National Scenic Area.

Ben Hutig SSSI/ SPA/ SAC/ Ramsar Favourable

Deer Management Units: Melness Crofters Estate (28), Melness (27).

Ben Hutig Site of Special Scientific Interest (SSSI) lies between Loch Eriboll and the Kyle of Tongue on the north coast of Sutherland. The 2,695 ha site is nationally important for its blanket bog and alpine heath habitats and for the exposures of Moine geology on Ben Hutig and the sea cliffs. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=183

Monitoring of the alpine heath and blanket bog notifiable features was carried out in 2005 and both assessed as Favourable Recovering condition.

The blanket bog on Ben Hutig SSSI has been internationally recognized and forms part of the Caithness and Sutherland Peatlands SAC and part of the Caithness and Sutherland Peatlands Ramsar site. The SSSI overlaps with the Caithness and Sutherland Peatlands SPA.

Ben Loyal SSSI/ SPA/ SAC/ Ramsar Recovering

Deer Management Units: Loyal ((29)

Ben Loyal Site of Special Scientific Interest (SSSI) lies at the head of the Kyle of Tongue on the north coast of Sutherland, within the Kyle of Tongue National Scenic Area (NSA). The 4,339 ha site is designated for its nationally important geology, blanket bog, upland habitats and birch woodland. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=187

The birch and rowan woodland covers the north and west lower slopes of Ben Loyal, and is one of the most northerly and extensive native woodlands in Britain.

Heavy browsing of the birch woodland was found during monitoring in 2004. Although the extent of the woodland, the tree species and the canopy cover met the required standards there was a serious lack of regeneration of young trees giving a poor tree age range. The overall assessment of the condition of the birch woodland in 2004 and the following monitoring assessment in 2010 was Unfavourable declining.

A survey commissioned by SNH was completed in 2009 and collected data on the age structure and herbivore impacts on the woodland to allow an assessment of the risk posed by current grazing levels to the continuity of the 92ha woodland.

The report concluded that *“In light of the over mature age structure of the woodland and complete absence of established seedlings and saplings the risk posed to the continuity of the woodland habitat is considerable under the current browsing regime.”* (Beck, 2009) Vegetative regeneration derived from “phoenix” trees was reported to be the only successful method of regeneration in the woodland. A reliance on this sole method of regeneration runs the risk of reduced genetic diversity.

“Evidence of trampling and dunging attributed to red deer was found at all plots.... Browsing [by red deer] on epicormic growth on mature trees and heather (where present) was high throughout the woodland; damage had usually occurred the previous winter and spring and summer shoots were often only lightly browsed.” (Beck, 2009)

A thick sward of grass and bracken, associated with an open woodland canopy, was noted as inhibiting tree seedling regeneration. *“A future decline in canopy density or woodland extent is likely to increase the proportion of grasses and dense bracken within the field layer and further restrict tree seedling regeneration. The dominance of grasses within the field layer may be as a result of long term browsing by herbivores.”* (Beck, 2009)

Blanket bog is found in localised areas at high altitude and extensively on the gentle, lower slopes of Ben Loyal. Monitoring in 2004 revealed that heavy browsing and trampling by deer and livestock had caused excessive levels of bare peat, crushed bog-moss and browsed dwarf shrubs. Muirburn had occurred on blanket bog, causing damage by burning into the moss and lichen layers. (SNH Management Statement 2009)

The mosaic of upland habitat types consists of moss heaths and montane dwarf-shrub heaths on the summit plateau with wet heath, heather moorland and blanket bog on the slopes. Monitoring in 2004 revealed heavy impacts on the upland habitats as a result of browsing of dwarf shrubs and from trampling causing bare ground. Burning had also occurred in sensitive habitats leading to an overall assessment of this feature as unfavourable.

Since 2006, sheep and cattle have not had access to the SSSI/SAC. It is now primarily managed for red deer. Under management agreements between SNH and the landowner there is no stock feeding in the winter and no muirburn.

Subsequent site condition monitoring in 2010 assessed the Blanket bog and Upland assemblage as unfavourable no change, as potentially ‘at risk’ from herbivore impacts. SNH commissioned a herbivore impact assessment on four designated features within Ben Loyal SSSI/SAC: blanket bog, Northern Atlantic wet heath, European dry heath and alpine and boreal heath. This information was then compared with the previous survey in 2004 to indicate trends.

Impacts on blanket bog and wet heath were largely Moderate or Low to Moderate for grazing and Low for trampling and dung abundance. Trends also indicated that, over recent years, impacts have generally been Low or Moderate. The areas which showed the greatest concentration with higher impact points were mainly located in the broad plain to the north of Loch Haluim, around Inchkinloch and along the Bhealach Clais nan Ceap to the north. Increasing impacts for blanket bog were noted from north of Loch Haluim and for Wet heath from Inchkinloch and along the northern Bhealach

All the results for alpine heath, principally located on high and exposed ground, indicated that the herbivores have a Low impact on this habitat and this had been the case for some time.

In contrast, impacts for trampling and grazing on dry heath were found to be high and trends indicate that, not only are chronic pressures relatively high on this habitat, but that impacts are increasing at 62% of samples. High impacts on as well as a preference for this habitat by deer were indicated by current browsing, recent prints and fresh dung. The distribution of the higher impact results was spread across the site; noted as mainly from the flanks of Ben Loyal, Ben Hiel and Cnoc nan Cuilean.

High trampling impacts were also common for wet and dry heath habitats along the Bhealach Clais nan Ceap, an important through route for deer as evidenced by the numerous well-used deer tracks in this area.

Impacts at this site are therefore largely attributed to the population of red deer. *“Signs of deer are present throughout the site and impacts are mainly associated with deer browsing and movement, although some of the chronic impacts, especially around the in-bye areas, should be attributed to past livestock.”* (Dayton, 2011).

The blanket bog on Ben Loyal SSSI has been internationally recognized and forms part of the Caithness and Sutherland Peatlands SAC and part of the Caithness and Sutherland Peatlands Ramsar site. The SSSI overlaps with the Caithness and Sutherland Peatlands SPA.

SNH (January 2015) make the following comments:

“ All features now under agreed management and monitoring regime. Whole site can be considered as recovering ”

This follows significant ongoing reductions in deer densities in recent years.

Cape Wrath SSSI, SPA & SAC Recovering

Deer Management Units: MoD Cape Wrath (1)

Cape Wrath Site of Special Scientific Interest (SSSI) at 1,015 ha, is located 8km west of Durness, Sutherland (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=311). The site is in two parts. The site is designated for the nationally important alpine heath and maritime cliff vegetation and the populations of seabirds that breed on the cliffs.

This site has one of the best examples in Britain of alpine heath growing at low altitude. Plants that are normally found only on mountain tops grow as low as 250m on this site due to the combination of exposure to wind and the northern location of Cape Wrath. The alpine heath was monitored in 2006. Whilst the extent of the heath had been maintained since previous monitoring visits, indicators, including the presence of too much grass as well as bare disturbed ground, suggested that sheep numbers were too high and causing damage to the heath. A stock fence was therefore erected to exclude sheep from the alpine heath and as a result of the new fence this feature has been assessed as recovering from unfavourable condition. All the qualifying breeding bird populations, except for puffins, were in Favourable Maintained condition.

SNH (January 2015) make the following comments:

“ The trampling and grazing impacts recorded were attributed to high sheep numbers. Sheep were removed from the site in 2006. It is now important that deer are actively managed at levels which can be sustained by the habitat. Monitoring will be important to achieve the right balance here.”

The SPA (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8481) at 6,737 ha overlaps with the SSSI seabird populations which breed on the cliffs as well as a 2km seaward extension into the marine environment. The SPA designation is centred entirely on the aggregations of breeding birds. The SAC designation (1,015 ha) covers the vegetated sea cliffs (maritime cliff vegetation).

(http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8219). These are deemed to be in **Favourable Maintained** condition.

Carn a' Mhadaidh SSSI Favourable

Deer Management Units: Kinloch (25)

Carn a' Mhadaidh SSSI is an impressive birch wood 4km southwest of the Kyle of Tongue, North Sutherland, lying to the west of the Kinloch river. The 65.78ha site has been designated for the open birch woodland that has developed over massive blocks of scree. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=320

Monitoring of the woodland in 2000 found it to be in favourable condition. *“No non-native species were recorded and the large amount of open space between the trees is a natural consequence of the limited number of sites available for tree growth on and between the boulders. Two or three age classes of trees were recorded at each survey point and saplings were recorded at three of the five survey points. Some dead wood was present, providing a habitat for invertebrates and fungi. Browsing of the saplings by deer was assessed as light to moderate at four of the five survey points, with heavy browsing found at one point. Some deer tracking was noticed, but the ground cover was lush throughout the site....”* (SNH Site Management Statement 2008).

Cnoc an Alaskie SSSI/ SPA/ SAC/ Ramsar Favourable

Deer Management Units: Altnaharra (41), Shinness (47), Fiag (43)

Cnoc an Alaskie Site of Special Scientific Interest (SSSI) is an area of blanket bog situated between Lairg and Altnaharra in central Sutherland. The 3664 ha site has been notified for its nationally important blanket bog habitat, upland breeding birds and the breeding population of greenshank http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=369.

The condition of the blanket bog habitat on Cnoc an Alaskie SSSI was monitored in 2002. This feature was assessed as being in favourable condition. Monitoring of the breeding bird population in 2012 assessed the features as unfavourable declining. The breeding greenshank population was assessed in 2009 as Favourable maintained.

The northeast corner of the site lies adjacent to the River Naver SAC, which has internationally important populations of Atlantic salmon and freshwater pearl mussel and forms part of the headwaters of a river. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8362

The blanket bog on Cnoc an Alaskie SSSI has been internationally recognized and forms part of the Caithness and Sutherland Peatlands Special Area of Conservation (SAC), the greenshank population forms part of the Caithness and Sutherland Peatlands Special Protection Area (SPA), with both the blanket bog and breeding bird assemblage forms part of the Caithness and Sutherland Peatlands Ramsar site.

Druim na Coibe SSSI/ SPA/ SAC/ Ramsar Recovering

Deer Management Units: Kinloch (25), Loyal (29)

Druim na Coibe Site of Special Scientific Interest (SSSI) is located 6km south of Tongue. The 1140 ha site has been notified for the nationally important area of blanket bog. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=533

The Blanket bog was assessed in both 2005 and 2010 as Unfavourable declining. In 2005, following monitoring two large drains had recently been dug in the south-west of the site

creating an area (c. 2000 m²) bare ground and damaging that part of the site by reducing the water level. Restoration work has taken place to allow peatland vegetation to recover across the damaged area. (SNH Management Statement, 2009). In addition to trampling impacts attributable to deer, this small area (0.2 ha) contributed to the then Unfavourable assessment. The greater part of the site was noted as being in good condition.

SNH (January 2015) make the following comments:

“ Trampling by red deer was the main reason for the Unfavourable assessment in 2010. Assured management is now in place, which will return the site to Favourable condition in the long term.”

The blanket bog on Druim na Coibe SSSI has been internationally recognised and forms part of the Caithness and Sutherland Peatlands SAC and part of the Caithness and Sutherland Peatlands Ramsar site. The SSSI overlaps with the Caithness and Sutherland Peatlands SPA.

Drium nam Bad SSSI/ SPA/ SAC/ Ramsar Favourable

Deer Management Units: Altnaharra (41), Strathmore South (40)

Drium nam Bad Site of Special Scientific Interest (SSSI) is located in central Sutherland, 5km west of Altnaharra. Most of the 3,124 ha SSSI is a peatland plateau. Reaching over 300m in altitude, the plateau is one of the highest altitude sites in Caithness and Sutherland. The site is also important for its high densities of breeding dunlin, golden plover and greenshank. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=534

Monitoring of the blanket bog on Drium nam Bad was undertaken in May 2003. *“There were no concerns with the levels of grazing, trampling or erosion in the areas that were sampled and the site had not been damaged by burning. The conclusions were that the blanket bog was in Favourable condition and that the current good management should continue.”* (SNH Management Statement 2008)

The densities of breeding dunlin, golden plover and greenshank were monitored in 2009. Dunlin and greenshank populations were assessed as Favourable maintained whilst golden plover were assessed as Unfavourable declining.

This SSSI is also internationally (SPA, SAC and Ramsar designated) important for the peatland habitats and upland breeding birds. The southern and eastern edges of the site are immediately adjacent to the River Naver SAC, which has internationally important populations of Atlantic salmon and freshwater pearl mussel.

Durness SSSI & SAC Unfavourable

Deer Management Units: Diall (2), Keodale (3), Balnakeil South (12), Keodale In-bye (13), Balnakeil North (14), Durness (15)

Durness SSSI (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=580) lies 15km east of Cape Wrath and extends to 2,000 ha. A range of nationally important coastal and upland habitats are present, as well as internationally renowned geological exposures. The geological features are all in Favourable condition.

Part of the SSSI, 1212 ha, is designated as Durness Special Area of Conservation (SAC) http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8246 for features of European importance, some of which are also SSSI features. The condition of the SAC notifiable features were assessed in 2010 with a number of SSSI/SAC features such as Alpine and subalpine

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calcareous grassland determined as Unfavourable no change and Limestone pavements determined as in Unfavourable declining. Additional SAC features such as Base-rich fens, European dry heaths, and wet heathland with cross-leaved heath were also assessed as Unfavourable no change.

SNH's Management Statement highlights the level of sheep grazing within the heath and upland habitats including the limestone pavement, as causing some damage to these plant communities. *"Where this is occurring, a reduction in stock numbers would be beneficial. Burning has damaged the site in the past. The vegetation in these upland habitats is slow growing and widespread hot fires can cause serious and long-lasting damage. Grazing and trampling pressures on burned habitats can exacerbate this damage and can also lead to the spread of bracken. The spread of bracken is in the process of being addressed with funding from the Rural Development Programme."*(SNH Site Management Statement, 2010)

SNH (January 2015) make the following comments:

"Livestock management is now in place on two of the three major holdings. No impacts currently attributed to deer."

Eriboll SSSI Unfavourable

Deer Management Units: Eriboll (18)

Eriboll Site of Special Scientific Interest (SSSI) extends to 1,779 ha (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=612) is located 11km southeast of Durness. The main part of the site has been notified for the nationally important Cambrian and Moine geology, woodland and heathland. The smaller part of the site at Lochan an Druim has been notified for the nationally important Quaternary sediments and fen vegetation.

The condition of two of the six notifiable features requires to be addressed; upland birch woodland (assessed in 2010) as Unfavourable declining and *Dryas* heath (assessed in 2008) as Unfavourable no change.

The woodland at Arnaboll contains predominantly birch *Betula pubescens* and rowan *Sorbus aucuparia*. Locally enriched areas with calcareous flushes support hazel *Corylus avellana* and a diverse ground flora. Bracken was noted across the site at a density that may be hindering regeneration. Grazing and browsing impacts were considered to be medium although some regeneration was evident along the slope. *"It is recognised that the deer using the site may be coming from surrounding areas outwith Eriboll Estate. Strict adherence to the prescribed DCS cull targets (which forms part of the current SRDP contract) should reduce grazing and trampling to levels that would allow successful woodland regeneration when combined with a bracken control programme."* (SNH Site Management Statement, 2010)

The calcareous soil that has formed near outcrops of limestone has created a suitable environment for *Dryas* heath, a very local type of heath vegetation. This is considered the finest example of this type of heath in the Highlands. The *Dryas* (mountain avens) heath was found to be in Unfavourable condition due to overgrazing and, to a lesser extent, trampling. Observations suggest that the resident sheep population favours the richer grazing on the limestone outcrops and associated *Dryas* heath. *"This concentration of sheep on a relatively small area leads to the effect of a very high stocking density despite what is actually a low to moderate density when considered over the whole agricultural unit."* (SNH Site Management Statement, 2010)

Sheep grazing levels have been agreed as part of an SRDP contract which includes refraining from muirburn and reducing stock numbers and should bring the *Dryas* heath feature back into Favourable condition. The Estate's commitment to reducing and maintaining deer numbers to an agreed target will also contribute to the habitat recovery.

SNH (January 2015) make the following comments:

“ Bracken is the main limiting factor, though browsing was found throughout the woodland. Both impacts require action. Sheep and deer are present. Alpine heath on the west of the site is under assured management and recovering. Opportunity through SRDP to address woodland issues.”

Foinaven SSSI, SAC & SPA Unfavourable

Deer Management Units: Rhiconich East (8), Gualin (9), Rhigolter (10), Polla (17), Eriboll (18), Reay- Arkle (19), Reay- Lone (20), Reay- Governuisgach (21)

Foinaven Site of Special Scientific Interest (SSSI)

(http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=647) is located 11km south east of Kinlochbervie. Covering 14,946 ha, 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 the Foinaven Special Area of Conservation (14,845 ha) (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8260). This designation recognises the European importance of the upland, peatland and loch habitats, and the freshwater pearl mussel (*Margaritifera margaritifera*) and otter (*Lutra lutra*) populations. The SSSI is also part of the Foinaven SPA (20,182.64ha) (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=10112) of European importance for golden eagle (*Aquila chrysaetos*).

Two notifiable features of the SSSI, upland birchwood and blanket bog were assessed as Unfavourable by SNH these are:

The upland birch wood in Strathbeg, which supports an unusual abundance of rowan with a rich, oceanic moss and liverwort flora was monitored in September 2002. It was found to be in Unfavourable declining 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.”* (SNH Site Management Statement, 2011)

A base line survey was therefore commissioned by SNH of two distinct areas of mature, predominantly birch woodland, referred to as Leathad na Surraig and Creag Shomhairle. Data on the age structure and herbivore impacts on the woodland were collected to allow an assessment of the risk posed by current grazing levels to the continuity of the woodland.

Within Leathad na Surraig prolific regeneration of small tree seedlings was noted, but few seedlings or saplings were found established above vegetation height. Recent damage to seedlings attributable to red deer was recorded at 18 of the 34 plots outside exclosures, whilst the intensity of dunging and trampling by red deer was recorded as medium or high at 32 out of 34 unfenced plots. Recent dunging and damage to seedlings by sheep was localized and occurred south of the Strathbeg Bothy.

The report concluded that for Leathad na Surraig urgent action is required. *“The decline in canopy density is likely to continue due to the high levels of browsing on seedlings and poor representation of large seedlings and saplings. As the existing seed sources become*

senescent or blow over, the potential to secure regeneration of seedlings will decline." (Beck, 2009)

Whilst the threat to the extent of Creag Shomhairle woodland posed by red deer browsing was assessed as *"...less immediate due to the age structure of the woodland, however the current levels of browsing, particularly by red deer, have prevented any recent tree establishment."* (Beck, 2009) The report concludes that the current levels of browsing will however eventually lead to a reduction in canopy density and a potential deterioration in the current assemblage of bryophytes and ferns.

Within both exclosures, recruitment of seedlings and saplings was noted. Factors such as vegetation competition and the lack of a suitable seed bed were restricting further regeneration of tree seedlings and potentially the diversity of ground flora in these exclosures.

The report author, noted that high levels of browsing by red deer outside the exclosures appears to be seasonal. *"Damage to seedlings by herbivores had usually been sustained the previous winter, with limited browsing to shoots within the current growing season. Levels of browsing on heather, an important winter food source for red deer, were also notably higher than those on grasses at the time of surveying in early August."* (Beck, 2009)

The area of blanket bog, mainly associated with most of the flat or gently sloping Gneiss terrain as well as a series of small valley bogs on the terraces alongside the River Dionard, was last monitored in 2004. The feature 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"* (SNH Management Statement 2011). As one of the qualifying features of the SAC, the blanket bog was monitored again in 2010 and assessed as Unfavourable, no change.

The SSSI upland assemblage feature was monitored in October 2004. Although at the time this feature was found to be in Favourable condition, subsequent assessments as part of the SAC designation in 2010, have highlighted deer pressure on some of the notified SAC habitats which is of concern. The qualifying habitat features ranked as Unfavourable include Alpine heath (located at higher elevations) Unfavourable declining, Species-rich grassland with matt grass in upland areas, Unfavourable no change, Wet heathland with cross-leaved heath, Unfavourable no change, plants in crevices on base-rich rocks, Unfavourable declining and depressions on peat substrates, Unfavourable no change.

A SNH commissioned grazing and trampling impact survey in 2010 gathered information on the nature and distribution of these impacts on a representative range of the designated interests of wet heath, blanket bog and dry heath on Foinaven SAC/SSSI. (Dayton & O'Hanrahan, 2011)

The overall prognosis for most of the site was generally good with overall impact results in the Low or Low-to-Moderate. There were also areas with local concentrations of higher impacts which were highlighted. The two areas with the highest impacts were Coire Grànda in the far south (blanket bog) and the Coire na Cùile-Bad na h-Achlaise area on the eastern slopes of Cranstackie (all habitats).

There was also a concentration of higher impacts around the northern side of Arkle and Loch nam Blàr-loch – mainly affecting the wet heath and dry heath. This was part of a more diffuse, extended zone with locally higher impacts stretching from Bealach Horn to Rhiconich which have the potential to cause significant further habitat damage to wet heath and blanket bog in particular. The far north of the site and most of Strath Dionard generally showed lower impacts – sometimes very low.

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Red deer were by far the main herbivores on the site. The main concentrations of deer appeared to be in the Coire Grànda - Meall Horn - Loch nam Blàr loch areas, with evidence of frequent movement between there and the coast near Rhiconich. There were lesser concentrations of red deer in parts of Strath Dionard. Some sheep were present principally on the northern parts of the site on Balnakeil Estate in as well as occasional stragglers within the Rispond & Polla and Eriboll areas.

Whilst the SSSI notifiable feature of the Breeding bird assemblage was assessed as favourable in 2007, the SNH Management Statement states “....some concerns were raised over the effects of deer trampling on potential nesting habitats,....”

SNH (January 2015) make the following comments:

“Positive progress on deer management has been made with most landowners. Livestock numbers are significant on one holding but management and monitoring is underpinned there through SRDP. The woodlands at Strathbeg are in urgent need of attention. One owner has taken steps to address the woodlands but the other larger area of woodland remains in a perilous state. Site condition monitoring and HIA of open ground features due in 2015 will be used to inform future management.”

There is a realistic prospect of Foinaven moving to a Recovering status in the near future.

Inverhope SSSI **Favourable**

Deer Management Units: Melness (27)

Inverhope SSSI is in the north of Sutherland. The 47.8ha site rises from sea level at the east bank of the mouth of the River Hope to an altitude of 150 metres. It has been designated as an SSSI for its geological and one of the most northerly birchwoods on mainland Scotland. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=814

The wood was found to be in favourable condition when last monitored in 2000. *“There was some evidence of light to moderate browsing of saplings by deer and sheep, but seedlings and saplings above browse height were present suggesting regeneration of the woodland was occurring. The wood is subject to very little disturbance and, although it is grazed by deer and sheep, the trees are regenerating successfully.”* (SNH Management Statement 2007).

Invernaver SSSI & SAC **Recovering**

Deer Management Units: Achnabourin North (35), Tongue North (31)

Invernaver Site of Special Scientific Interest (SSSI) is located 0.5km to the west of Bettyhill. The 623 ha site (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=815) is designated for its exceptional coastal geomorphology, sand dune, saltmarsh and upland habitats and its botanical interest. The Invernaver SAC (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8276) encompasses 294.54ha of the SSSI.

Invernaver is one of the most important botanical sites in Scotland, with unusual plant communities and a rich flora. It provides one of the best examples of “altitudinal descent” in Britain (vegetation that normally only grows at the tops of mountains growing at low altitude due to the influence of the sea and being so far north). Wind-blown, calcareous sand influences large parts of the site, and reaches unusually high altitudes, creating rare plant communities on the base-rich soil. It is also one of the best sites in Britain to see the great variety of growth forms adopted by juniper.

The vascular plants SSSI notifiable feature which includes eight nationally rare or scarce vascular plant species was assessed as Unfavourable, no change in 2003.

The SSSI 'upland assemblage' feature at Invernaver was assessed as Unfavourable no change during monitoring in 2010. The related SAC features, Base-rich fens (Unfavourable recovering), Alpine and subalpine heaths (Unfavourable recovering) as well as Alpine and subalpine calcareous grasslands (Unfavourable no change), which are part of the European interest of the site were also found to be in Unfavourable condition in 2010.

The maintenance of a suitable level of grazing is a key factor maintaining plant diversity and is crucial to the condition of vascular plant populations. Stocking levels across the site have over recent years swung from being on the heavy side to being too low for most species and undesirable changes in these features have been noted. It is understood that appropriate livestock measures are in place to address this. Livestock management appears to be more relevant to this site than deer usage, with the latter being, if anything, beneficial.

SNH (January 2015) make these comments:

“Livestock management now in place includes active shepherding. Deer are not considered an issue on this site and current population levels and management should be retained.”

A small part of Invernaver SSSI overlaps a small part of the River Borgie SSSI (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1685) and SAC (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8356) notified for Atlantic salmon (SAC only), freshwater pearl-mussel and otter (SAC only). Of these species, otters are regarded as Favourable, salmon as Unfavourable Recovering and freshwater pearl mussel as Unfavourable declining.

Loch Meadie Peatlands SSSI/ SPA/ SAC/ Ramsar Recovering

Deer Management Units: Altnaharra (41), Strathmore East (24), Kinloch (25), Loyal (29).

Loch Meadie Peatlands Site of Special Scientific Interest (SSSI) is located in central Sutherland, 2km north of Altnaharra. The 6,211ha site is designated for its nationally important blanket bog and breeding birds as well as the unusual rock types that record some of the earliest geological history of Scotland.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1009

The blanket bog was assessed to be Favourable condition during monitoring carried out in May 2003. At this time, *“there were no significant concerns with grazing levels although there were some localized areas of heavier grazing towards the northern part of the site.”* (SNH Management Statement 2009).

As a result of management changes, changes in both deer numbers and movements and on-going habitat condition problems on nearby designated sites, SNH commissioned a Herbivore Impact Assessment (HIA) on the blanket bog feature in 2011. The subsequent site monitoring in 2011 assessed the notifiable feature as Unfavourable declining.

In the HIA report impacts for grazing were recorded as Moderate or above at just over 25% of points. Most of the grazing impacts fell into the Moderate to Low category suggesting a fairly consistent use of the site by deer for feeding.

Trampling impacts at a level (High, High to Moderate and Moderate) which could lead to deterioration of feature condition were found at 22% of points surveyed. At 84% of the points surveyed dung levels were low.

In assessing the combined Impacts, *“One point scored High for grazing, two for trampling and three for dung abundance. None of these High scores were at the same point. Of the*

High to Moderate scores for grazing and trampling three were at the same point.” (Wilson 2012)

Of the long-term (chronic) impacts, almost 30% were found to be Chronic High or Chronic Moderate. Just over 3% of the survey points indicated a trend of increasing impacts whilst 51% showed a trend of decreasing impacts. At more than half of the points there was no discernable trend.

“The noticeable tendency for the majority of impacts to fall into the Low and Decreasing categories suggests that impacts may have been higher on this site than they are now and that the trend is a decreasing one. This also suggests the site could move towards Favourable condition over time with the existing management, however, the move to Favourable condition is more likely to be secured with collaborative action to reduce deer impacts.” (Wilson, 2012)

Monitoring of the breeding birds took place in 2007. The area of habitat available for use by these breeding birds had been maintained and overall this feature was found to be in favourable condition. (SNH Management Statement 2009)

SNH (January 2015) provide these comments:

“ Trampling by red deer had been the main reason for Unfavourable assessment. Some browsing and historic burning also noted. One estate now in SRDP over this site, another in assured management, and a third requires no change to management. The site should recover in time with the management now in place.”

This SSSI is also internationally (SPA, SAC and Ramsar designated) important for the peatland habitats and upland breeding birds.

Loch Stack and River Laxford SSSI Favourable

Deer Management Units: Reay- Arkle (19)

Loch Stack and River Laxford Site of Special Site of Scientific Interest (SSSI) is located between Achfary and Laxford Bridge and is designated for six nationally important features: Oligotrophic loch, Oligotrophic river/ stream, Upland birchwood, Breeding bird assemblage, Black-throated diver, Freshwater pearl mussel. All features were assessed as Favourable maintained in 2003/ '04 apart from freshwater pearl mussel which was assessed as Unfavourable no change in 2008.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1055

The small, designated birch-rowan woodland grows on a boulder field. *“Although tree regeneration is occurring (particularly in the more inaccessible locations), grazing by deer is a potential threat around the woodland edges, with noticeable declines in natural regeneration within these areas.”* (SNH Management Statement 2009).

River Borgie SSSI & SAC UnFavourable

Deer Management Units: Tongue North (31), FE Borgie (32).

The River Borgie Site of Special Scientific Interest (SSSI) lies between Bettyhill and Tongue. The 32.28ha site has been designated for its nationally important population of freshwater pearl mussel. The population was assessed in 2009 as Unfavourable declining. This has little relevance to deer. http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1685

River Borgie SAC http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8356 is notified for Atlantic salmon (Unfavourable recovering 2005), freshwater pearl mussel (Unfavourable

declining 2009) and otter (Favourable maintained 2005).

The mouth of the River Borgie SSSI/ SAC overlaps with the Invernaver SSSI (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=815) and SAC (http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8276) **Recovering**.

Part of the upper reaches of the River Borgie SSSI overlap with West Borgie SSSI, http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1602 designated for its blanket bog, breeding birds and geology. These same areas of the West Borgie SSSI forms part of the Caithness and Sutherland Peatlands Special Area of Conservation (SAC), part of the Caithness and Sutherland Peatlands Special Protection Area (SPA) and part of the Caithness and Sutherland Peatlands Ramsar site.

Sheigra – Oldshoremore SSSI & SAC Favourable

Deer Management Units: Sandwood (4)

Sheigra – Oldshoremore SSSI is located 3km northwest of Kinlochbervie. The 251.21ha site includes three bays (Sheigra, Oldshore Beg and Oldshoremore) which have nationally important areas of dune and machair habitat. This site has the best examples of these habitats in Sutherland and amongst the best in Britain.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1419

The notifiable features were assessed in 2013 as Favourable maintained.

The SSSI is included in the Oldshoremore and Sandwood Special Area of Conservation (SAC) totalling 443.73ha. The SAC features ‘dune grassland’ and ‘shifting dunes with marram’ subtypes of the sand dune SSSI feature along with the machair SSSI feature were assessed as Favourable maintained in 2013.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8344

Southern Parphe SSSI & SAC Recovering

Deer Management Units: Keodale (3), Sandwood (4).

Southern Parphe SSSI lies 4km north of Kinlochbervie. The 5,285 ha site is notified for its nationally important coastal landforms, and sand dune, maritime cliff, alpine heath and blanket bog habitats http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1459.

Following monitoring in 2008, two of the SSSI notifiable features, Alpine heath and Blanket bog were found to be in Unfavourable, no change condition.

The high latitude and level of exposure of Southern Parphe has led to the development of alpine heath vegetation at an unusually low altitude. The dwarf shrub community is dominated by heather. The Alpine heath was assessed as Unfavourable due to the effects of grazing, indicated by the presence of undesirable grass species which would not naturally occur in this habitat, signs of browsing on dwarf-shrub and also areas of disturbed bare ground. (SNH Management Statement, 2010)

Blanket bog has developed over the flatter ground and a range of bog types are found on the site. These include watershed and valley-side mires, with a variety of surface patterns and pool types. These are amongst the most north-westerly areas of blanket bog in the country, giving rise to distinctly oceanic vegetation. The blanket bog was found to be in Unfavourable condition as a result of damage attributed to a combination of trampling by sheep and deer and burning. Moor-gripping affects a wide area of very gently-sloping bog on the western side of Strath Shinary. (SNH Management Statement, 2010)

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The site is mainly managed for sheep grazing, with the coastal areas the most intensively grazed. Rabbits are also present. There is evidence of past muirburn across much of the site and burning continues to occur in certain areas. Several fires have occurred in recent years damaging extensive areas of peatland, grassland and heath. Recently, however, deer numbers have been steadily increasing. (SNH Management Statement, 2010)

A total of 1654 hectares of peatland within the site has recently been covered by Peatland Management Scheme (PMS) agreements with SNH. These agreements stipulated the number of stock that could be hefted across the area and did not permit muirburn on any part of the site covered by the agreements.

SNH (January 2015) make the following comments:

“ Livestock management now in place but deer management needs to be monitored”.

Part of the SSSI is included in the Oldshoremore and Sandwood Special Area of Conservation (SAC) totalling 443.73ha. The SAC features ‘dune grassland’ and ‘shifting dunes with marram’ present on this SSSI are also subtypes of the sand dune SSSI feature assessed as Favourable maintained in 2013.

Strath Duchally SSSI/ SPA/ SAC/ Ramsar Favourable

Deer Management Units: Merkland (42), Fiag (43), Overscaig (45)

Strath Duchally Site of Special Scientific Interest (SSSI) is situated north of Loch Shin in central Sutherland. The 1,616 ha site has been notified for the nationally important blanket bog habitat and breeding populations of dunlin, golden plover and greenshank

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1489

The blanket bog on Strath Duchally was monitored in May 2009. As there were no indicators of damage it was concluded that the blanket bog was in Favourable condition. “Red deer trampling pressure was evident over parts of the site, for example where deer were walking alongside the fence that crosses the site, but it was concluded that deer trampling pressure was within acceptable limits. Although the blanket bog was found to be in Favourable condition, it could be enhanced by a decrease in trampling by deer.” (SNH Management Statement 2009)

Monitoring in 2009 assessed the breeding densities of golden plover and dunlin as Favourable recovering and greenshank Favourable maintained.

This SSSI is also internationally (SPA, SAC and Ramsar designated) important for the peatland habitats and upland breeding birds.

Syre Peatlands SSSI/ SPA/ SAC/ Ramsar Favourable

Deer Management Units: Poole (36), Syre (38), North Lochnaver (39).

Syre Peatlands Site of Special Scientific Interest (SSSI) is in central Sutherland, 13km northeast of Altnaharra. The 3176 ha site is nationally important for the large area of high quality blanket bog and the upland birds that breed there, including black-throated diver, greenshank and wigeon.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1512

The blanket bog was monitored in June 2006. The area of blanket bog had been maintained since the survey in 1991. *“The site was considered to be in Favourable condition when it was surveyed in June 2006. However, during April 2007 a fire which started to the north of Loch Syre burned c. 730ha of the site. Some of the vegetation on this ground may recover*

fairly rapidly but there is likely to be long term damage where the fire was most intense.”
(SNH Management Statement 2009)

The wide range of upland bird species found breeding or foraging on the site meant that the breeding bird assemblage feature was assessed as Favourable maintained condition during monitoring in 2006. The greenshank and wigeon populations were assessed in 2009 as Favourable maintained. In 2003, the black-throated diver population was assessed as Favourable maintained.

This SSSI is also internationally (SPA, SAC and Ramsar designated) important for the peatland habitats and upland breeding birds. *“Most of the site drains into the River Naver catchment and the Langdale Burn, the outflow from Loch Syre. This is also part of the River Naver SAC, of interest for its populations of Atlantic salmon and freshwater pearl mussel.”*
(SNH Management Statement 2009)

West Borgie SSSI/ SPA/ SAC/ Ramsar Favourable

Deer Management Units: Tongue South (30), FE Borgie (32), FE Open Ground (33), Poole (36).

West Borgie Site of Special Scientific Interest (SSSI) is located in the north of Sutherland, 3km east of Tongue. The 2,207 ha site covers an area of peatland in the upper catchment of the River Borgie. The site is designated for the nationally important igneous geology, blanket bog and upland breeding birds.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1602

The blanket bog was assessed as being in Favourable condition in 2003. Monitoring of the breeding bird assemblage in 2012 found a diversity of bird species and was assessed as Favourable maintained

This SSSI is also internationally (SAC and Ramsar designated) important for the peatland habitats and upland breeding birds and overlaps with the Caithness and Sutherland Peatlands SPA. The site also forms part of the catchment of the River Borgie SSSI/ SAC which has populations of otter, Atlantic salmon and freshwater pearl mussel which are of international importance.

West Strathnaver SSSI/ SPA/ SAC/ Ramsar Unfavourable

Deer Management Units: FE Open ground (33), Achnabourin South (34), Poole (36).

West Strathnaver Site of Special Scientific Interest (SSSI) is located west of the River Naver, 4km south of Bettyhill. The site is nationally important for the blanket bog habitat and the range of breeding birds it supports.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=1611

The blanket bog was assessed in 2004 as being in Unfavourable condition because a fire had damaged extensive areas of the bog in 2001. A further fire in 2007 severely damaged 760ha of the site and it was estimated that only 122ha (4%) of the site had not been burnt since 2001. Damage from these very large, uncontrolled fires is likely to have caused long-term damage to the vegetation on the site, exposing the peat surface to erosion and trampling by animals (deer and livestock). Subsequent site condition monitoring undertaken in 2009 assessed the blanket bog as Unfavourable declining.

The area and diversity of habitat provides ideal conditions for a range of waders, raptors and wildfowl to nest, hatch and rear their chicks. Monitoring in 2004 of this breeding bird assemblage recorded a reduction in species and the notifiable feature assessed as Unfavourable. *“Deterioration in the blanket bog habitat due to the extensive fires on the site*

could be partly responsible for the low number of species seen.” (SNH Management Statement 2009). Monitoring undertaken in 2009 assessed this feature as Favourable recovering.

SNH (January 2015) provide the following comments:

“ *Main issue is burning, followed by trampling and drainage to the south. Deer and stock trampling on previous burnt ground is of concern.*”

This SSSI is also internationally (SAC and Ramsar designated) important for the peatland habitats and upland breeding birds and overlaps with the Caithness and Sutherland Peatlands SPA.

Caithness and Sutherland Peatlands Ramsar

The Caithness and Sutherland Peatland Ramsar covers 143,502 ha in North Scotland with the western boundary of the site located within the NW Sutherland DMG area.

The Ramsar designation covers four qualifying features, three of which have been assessed.

The breeding bird assemblage as well as 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.

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

All or part of the following SSSIs overlap with the Ramsar designation: A' Mhoine, Ben Hutig, West Borgie, West Strathnaver, Syre Peatlands, Bad na Gallaig, Loch Meadie Peatlands, Druim nam Bad, Ben Loyal, Druim na Coibe, Cnoc an Alaskie, Strath Duchally. Within this range of sites, blanket bog habitats under SSSI and SAC designations range from Unfavourable and declining through to Favourable maintained status.

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

Caithness and Sutherland Peatlands SPA

Caithness and Sutherland Special Protection Area (SPA) extends to 145,517 ha in North Scotland http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8476.

The SPA qualifying species includes internationally important populations of dunlin, 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 black throated diver and golden plover were assessed as Unfavourable declining in 2007 and 2009 respectively. All other species are listed as Favourable Maintained.

The site overlaps with the Caithness and Sutherland Peatlands SAC & Ramsar as well as the River Naver SAC.

Caithness and Sutherland Peatlands SAC

Caithness and Sutherland Peatlands Special Area of Conservation (SAC) extends to 143,538 ha in North Scotland http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8218

NW Sutherland Deer Management Group

Designated Sites

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.

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

The boundaries of the SAC and SPA includes all or part of twelve peatland SSSIs within the NW Sutherland DMP area: A’Mhoine, Bad na Gallaig, Ben Hutig (coastline excluded), Ben Loyal, Cnoc an Alaskie, Druim na Coibe, Druim nam Bad, Loch Meadie Peatlands, Strath Duchally, Syre Peatlands, West Borgie and West Strathnaver. As with the Ramsar classifications, the SSSI designated blanket bogs within these sites range from Unfavourable Declining to Favourable Maintained.

River Naver SAC

The River Naver Special Area of Conservation extends to 1,066 ha.

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

The site was designated for two qualifying interests of Freshwater pearl mussel, assessed as unfavourable no change in 2004, as well as Atlantic salmon, assessed as unfavourable recovering following monitoring in 2003.

There are two National Scenic Areas designated located within the DMG area.

Kyle of Tongue NSA http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=9133
encompasses 18,500ha.

The special qualities identified in the designation are:

- An ever-present backdrop of mountains
- The Kyle – a link from an inhabited coast to a wild, moorland
- Scale, from domestic to monumental
- The constantly changing character of the Kyle
- Rich variety of coastal scenery
- Distinct pattern of settlement

All or part of the following SSSI areas overlap with the NSA: Ben Hope, Ben Loyal, Aird Torrisdale, Druim na Coibe, Carn a’ Mhadaidh, Invernavear and the A’ Mhoine.

North-West Sutherland NSA encompasses 20,500ha.

http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=9144

The special qualities identified in the designation are:

- A landscape of rock
- The backdrop of distinctive mountains
- A complex landscape of rock, water and sky
- Intimate mix of sea and land
- Contrast between extensive uninhabited land and localised human settlement
- Extensive tracts of wild land
- Handa’s towering sea cliffs

All or part of the following SSSI areas overlap with the NSA: Loch Stack & River Laxford, as well as Foinaven.

REFERENCES:

Beck, A. (2009) Foinaven Site Of Special Scientific Interest and Special Area of Conservation: Assessment of Herbivore Impacts and Woodland Profile Survey. *Scottish Natural Heritage, Commissioned Report No. 332*

Beck, A. (2009) Ben Loyal Site Of Special Scientific Interest: Assessment of Herbivore Impacts and Woodland Profile Survey. *Scottish Natural Heritage, Commissioned Report No. 333*

Dayton, N, O'Hanrahan B. (2011) An assessment and evaluation of herbivore impacts on designated habitats at Foinaven SSSI/SAC. *Scottish Natural Heritage, Commissioned Report No. 451*

Dayton, N. (2011). An assessment and evaluation of herbivore impacts on designated habitats at Ben Loyal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). *Scottish Natural Heritage Commissioned Report No.425.*

MacKenzie, N.A. & Clifford, T. (2010). A woodland profile survey and assessment of herbivore impacts for Ben Hope SSSI. *Scottish Natural Heritage Commissioned Report No. 405.*

Maier, R. (2012). Assessment of herbivore impacts on designated upland habitats on Ben Hope SSSI. *Scottish Natural Heritage Commissioned Report No. 516*

Wilson, V. (2012). HIA Loch Meadie Peatlands SSSI. *Scottish Natural Heritage.*