Lynemore Wind Farm

Environmental Impact Assessment (EIA) Report

Technical Appendix 6.1: Habitats and Vegetation

avianecology

CONTENTS

1 INTRODUCTION

1.1.1 This Appendix has been prepared to accompany **Chapter 6: Ecology and Biodiversity** of the Lynemore Wind Farm Environmental Impact Assessment (EIA) report. It presents the baseline habitat data collected to inform the design and assessment of the Proposed Development.

1.1.2 The objectives of this Appendix are to:

- Establish the spatial distribution of habitats and vegetation communities which may be impacted by the Proposed Development;
- Identify the presence and distribution of any Annex I habitat types[1], habitats that are listed on the Scottish Biodiversity List[2], and/or which represent potential Groundwater Dependent Terrestrial Ecosystems[3] or priority peatland[4]; and
- Record the presence of any protected or non-native invasive plant species.

1.1.3 Survey methodologies and the subsequent interpretation of results in this Appendix refer to key pieces of guidance, which are listed in **Section 7: References**.

1.1.4 Common species names are used throughout the text of this Appendix. The only exception is where species are stated in the name of NVC communities and NVC data. The corresponding scientific names for all listed species are supplied in **Annex 4**.

1.2 Terminology

- Proposed Development - the physical infrastructure for the proposed Lynemore Wind Farm.
- The Application Boundary - the application red line boundary comprising of the Site and Site Access.
- The Site - everything within the Application Boundary except the Site Access.
- Site Access - the route from the public road to the Site within the Application Boundary.
- The Survey Area – the area over which baseline surveys were conducted.

1.2.1 Due to the iterative approach to design that has been ongoing throughout the baseline survey period, the Proposed Development, Application Boundary and survey scope have evolved over the course of baseline studies. Therefore, the surveys have been undertaken with reference to 'Study Areas' which are described in **Section 2.2** and shown on **Figure 6.2**, and which may not in all cases precisely correspond with the Application Boundary.

1.3 Site Overview

1.3.1 The Site is located on the hills 2 km west of the A9 at Moy within the Highland Council area. The Site is mostly open moorland abundant in bogs and pools. The terrain within the Application Boundary ranges from 300 m above sea level at the side of the A9, to 616 m at the summit of Carn na h-Easgainn. The Site is managed as a shooting estate. Areas of open deciduous woodland and commercial

[1] The Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora). As per guidance JNCC (2019).
[2] Habitats of principal importance for biodiversity conservation in Scotland (NatureScot, 2020).
[3] As per guidance from Scottish Environment Protection Agency (2017).
[4] As per guidance from NatureScot (2023).

plantation lie to the north of the Site. The Farr/ Glen Kyllachy Wind Farm complex lies approximately 2 km to the southwest of the Site.

2 METHODOLOGY

2.1 Desk Study

2.1.1 A desk study was undertaken to identify the proximity of the Site to any statutory or non-statutory designated site for nature conservation with habitat or botanical qualifying interest. This used publicly available datasets as well as consultation with the relevant Biological Records Centre (**Table 2.1**).

Table 2.1. Key desk study sources and the information obtained.

Key Source	Date of Most Recent Consultation	Information Sought	Study Area
Sitelink (NatureScot, 2024)	10th October 2024	Proximity to statutory designated sites.	Within 10 km of the Application Boundary.
Scotland's Environment Web	14th February 2025	Status of habitats within the Application Boundary	Within the Application Boundary
Highland Biological Recording Group	5th August 2023	Proximity to non-statutory designated sites.	Within 2 km of the Study Area (an earlier iteration of the site boundary).

Limitations

2.1.2 The sources used in the desk study did not include records of vascular plants with protected status occurring in proximity to the Site.

2.2 Field Surveys

2.2.1 Field surveys were conducted between 2023 and 2024 in accordance with standard methodologies (see **Table *2.2***):

- A Phase 1 and NVC survey was conducted in October 2023 by M. Wood and J. Morton. The Study Area (Study Area 1) was an early iteration of the site boundary and the survey area was a 250m buffer zone around this.
- An NVC survey of two additional areas of land (Study Area 2) within the Lynemore estate boundary was conducted in May 2024 by S. Green and M. Bates (HEL). These areas extended to the north-east corner of the Site (the Site Access) along the Allt na Slanaich, and at the north-west corner of the Site.
- A further Phase 1 and NVC survey was conducted in August 2024 by J. Morton, of land extending the southeast corner of the Site (Study Area 3) plus a 250m buffer. This was to account for additional proposed turbine locations.

2.2.2 Habitats data was collected for a 250 m buffer of a further change in turbine location (Study Area 4) during the course of hydrology surveys carried out for the new turbine location. Study and Survey Areas are shown on **Figure 6.2**. All field personnel are competent ecologists and botanists, with

considerable experience of undertaking these methodologies across numerous comparable sites in Scotland.

2.2.3 Analysis of the NVC data was conducted by C. Dean; a competent botanist with experience of undertaking and analysing NVC surveys.

Table 2.2. Descriptions of the survey methodologies used for this report.

Survey Type	Brief Description	Key Outcomes	Guidance
Phase 1	Habitat types are classified based on vegetation, observable hydrology, topography, and land use. Small features of interest are recorded and mapped using 'target notes'. The survey can be extended to also record signs of the presence, or potential presence, of protected species (e.g. birds, mammals) including the presence of habitat types that might provide suitable breeding or refuge areas	A broad overview of the habitat types occurring within an area and their extent. Corresponding to priority habitats listed on the Scottish Biodiversity List. Identify the presence or potential presence of species listed on Schedules 8 and 9 of the Wildlife and Countryside Act (1981) and/or the Scottish Biodiversity List.	Handbook for Phase 1 habitat survey – a technique for environmental audit (JNCC, 2016)
National Vegetation Classification (NVC)	Data are collected on the identity and abundance of all plant species present within $2m^2$ quadrats, which are distributed throughout homogenous stands. These data are then analysed, and each homogenous stand is classified to an NVC vegetation community.	Providing a finer level of detail than provided by Phase 1. Specific NVC communities signify possible Annex 1 habitats, Priority Peatland, and/or Groundwater Dependent Terrestrial Ecosystems.	National Vegetation Community Users' Handbook (Rodwell, 2006) British Plant Communities (JNCC, 1991 - 92) MAVIS Plot Analyser (2016)

3 RESULTS: DESK STUDY

3.1 Statutory Designated Sites for Nature Conservation

3.1.1 In review of Sitelink, the Site does not form a part of any internationally or nationally designated site for nature conservation. There are however four designated sites within 10km of the Site, of which three have relevant habitat features. See **Table *3.1***.

Table 3.1. Statutory designated sites for nature conservation located within 10km of the Site.

Site	Designation(s)	Distance from Application Boundary	Reason for Designation
Carn nan Tri-tighearnan	SAC	4.62 km	Annex I habitat – 7130 Blanket bogs (above 600m).
Loch Ruthven	SSSI, SPA, Ramsar site, SAC	9.38 km	Annex I habitat - 3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoëto-Nanojuncetea*. Otter Breeding birds.
Loch Ashie	SSSI, SPA	8.65 km	Breeding birds (Slavonian grebe).
Slochd	SAC	6.87 km	Annex I habitat – 4030 European dry heaths (H16 *Calluna vulgaris–Arctostaphylos uva-ursi* heath).

Ramsar Site: Wetland of International Importance, SAC = Special Area of Conservation, SSSI = Site of Special Scientific Interest, SPA = Special Protection Area.

3.2 Non-Statutory Designated Sites for Nature Conservation

3.2.1 The data search conducted by HBRG did not find any records of non-statutory designated sites within 2 km of the Study Area.

3.3 Priority Habitats

3.3.1 The Carbon and Peatland Map 2016 (NatureScot, 2016) available on Scotland's Environment Web[5] shows that the majority of the Site comprises Class 1 peatland, defined as "*Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas likely to be of high conservation value*"

3.3.2 The Native Woodland Survey of Scotland identifies the majority of the woodland present within the Application Boundary as upland birchwood with smaller areas of juniper scrub. Several areas of extant woodland within the Application Boundary are listed on the Ancient Woodland Inventory Scotland.

[5] https://www.environment.gov.scot/ last accessed 27/02/2025

4 RESULTS: HABITATS AND VEGETATION COMMUNITIES

4.1 Overview

4.1.1 These results should be read with reference to **Figure 6.3a-f Habitat Survey**.

4.1.2 Phase 1 Target Notes are detailed in **Annex 1**, full NVC survey data are presented in **Annex 2**, and corresponding photographs are presented in **Annex 3**.

4.1.3 The survey recorded 12 Phase 1 habitats, that correspond to 19 NVC communities. These are:

- D1.1 Dry heath - acid: H12, H13, H16, H21
- E2.1 Acid / neutral flush: M4, M5, M6
- E2.2 Basic flush: M10
- E2.3 Bryophyte dominated spring: M32
- D2 Wet heath: M15
- E1.6.1 Blanket bog: M17, M19
- E1.8 Dry modified bog: H9
- B1.1 Acid grassland – unimproved: U4, U5
- B1.2 Acid grassland – semi-improved: U4
- B5 Marshy grassland: M23
- A1.1.1 Broadleaved woodland – semi-natural: W4, W17
- A2 Scrub: W19.

4.1.4 In addition, three habitats did not fit into any of the NVC communities and so have been recorded as Phase 1 habitat categories only. These are:

- A1.2.2 Coniferous Plantation
- E4 Bare Peat
- G2.4 Running water - dystrophic.

4.2 D1.1 Dry Heath - Acid

H12 Calluna vulgaris - Vaccinium myrtillus heath

4.2.1 This heath community is widespread across the Site, occurring in Study Areas 1, 2 and 3. It is found growing as continuous stands or as a component of wider moorland communities such as blanket bog, wet heath, and acid grassland. It occurs on steep, well-drained slopes with shallow and 'rocky' soil. These stands seem to be only lightly grazed, and the heather is relatively tall and bushy.

4.2.2 The vegetation is dominated by thick stands of common heather, with occasional bell heather and cross-leaved heath, and regular but sparse bilberry, cowberry, and crowberry. The ground layer contains numerous hypnoid mosses, primarily glittering wood-moss, red-stemmed feather-moss and heath plait-moss, and reindeer lichen. Two sub-communities were recorded, the H12a typical sub-community and the H12b *Vaccinium vitis-idaea - Cladonia portentosa* sub-community.

4.2.3

H13 *Calluna vulgaris - Cladonia arbuscula* heath

4.2.4 This habitat occurs on the stony ground leading towards the summit of Carn na Loinne, on extremely thin soils often interspersed with bare rocks, and exposed to the weather. This is a heath of wind-pruned prostrate common heather, standing to around 10 cm tall.

4.2.5 The community is species-poor. Interspersed below the heather are abundant mats of reindeer lichens, as well as woolly fringe-moss and heath plait-moss, but otherwise only scattered and isolated examples of bell heather, crowberry, bilberry, stiff sedge, deergrass, and fir clubmoss.

4.2.6 This community appears very similar to the H16 dry heath described below, and the two communities transition leading up to the summit of Carn na Loinne, but this H13 community has been classified separately due to the extremely short and prostrate growth-form of the heather (Averis *et al*. 2004) and the absence of bearberry.

H16 *Calluna vulgaris - Arctosaphylos uva-ursi* heath

4.2.7 This heath community is only found in a few, relatively small areas around the summits of Carn na Loinne, Carn na h-Easgainn and its adjacent satellite peak, at around 600 metres above sea level. It occurs on very shallow, well drained peat with stones and bedrock near the surface. The vegetation is very short; a result of its exposure to the elements and moderate grazing pressure. The community transitions into adjacent areas of blanket bog where the peat depth increases. The vegetation is dominated by very diminutive ericoids, primarily common heather with a lesser amount of bearberry, bilberry, cowberry and crowberry, thus resembling the H16b *Vaccinium myrtillus - Vaccinium vitis-idaea* sub-community. The ground layer contains reindeer lichen, Iceland moss, and woolly fringe-moss.

H21 *Calluna vulgaris - Vaccinium myrtillus - Sphagnum capillifolium* heath

4.2.8 This heath community occurs primarily in Study Area 2 on north facing slopes and in steep sided shady burn gullies. It also forms mosaics with adjacent areas of H12 dry heath and acid grassland; communities that are generally a bit drier than the H21. It grows on shallow but some somewhat flushed and damp soils and peat. Grazing appears light.

4.2.9 The vegetation is dominated by thick stands of common heather, with lesser amounts of bilberry and cowberry. The ground layer contains a thick carpet of mosses, mostly a mix of acute-leaved and flat-topped bog-mosses, and common haircap. The herbs tormentil and heath bedstraw are also present. This type of vegetation best fits into the H21a *Calluna vulgaris - Pteridium aquilinum* sub-community.

4.2.10 There are also stands of what appears to be an H21 type heath (Study Area 2) where eared willow is abundant as a canopy layer over the heath. This type of vegetation does not seem to have a natural fit to any published NVC community and so is included here as H21 due to the ground flora, though equally could be considered a form of willow scrub.

4.3 E2.1 Acid / Neutral Flush

M4 *Carex rostrata - Sphagnum fallax* mire

4.3.1 This flush community is of restricted occurrence within the Site, occurring as the principal vegetation type in two small patches in Study Area 2, and as a lesser component of mosaics with other flush communities and rush pasture. It is a community of wet peats and is characterised by the abundance of bottle sedge over a bed of flat-topped and blunt-leaved bog-mosses. The few other associates include common sedge, soft rush, and common sorrel, which occur at a low abundance.

M5* *Carex rostrata - Sphagnum squarrosum* mire

4.3.2 This community has been used as a 'best fit' designation to describe several small stands of vegetation in Study Area 3 which occur on the margins of flushes and small watercourses within peat haggs. These areas more generally tend to be dominated by M6 vegetation. However, the additional flow of water from further up the hagg system seems to be moderately-base rich, possibly as a result of contact with rock in the deeply eroded peat channels, and as such these small, scattered stands of vegetation appear to be of a different character.

4.3.3 Most notably, the bryophyte layer in these areas contains much spiky bog-moss and scarce rigid bog-moss, in addition to flat-topped bog-moss, bog bead-moss and dotted thyme-moss, making up a patchy bryophyte layer that appears fairly consistent with M5 mire vegetation (Averis *et al*. 2004). Vascular plants are scarcer, although patchy sedge growth includes white, star and common sedges, and occasionally there are examples of marsh willowherb and water horsetail. Water starwort occurs sporadically, and one sparsely vegetated pool adjacent to this vegetation includes common mare's-tail.

M6 *Carex echinata - Sphagnum fallax* mire

4.3.4 This mire community is patchily distributed across the Site. It occurs on sloping ground, which is very wet underfoot due to groundwater draining through the landscape, often in natural depressions and along burn gullies. The ground is of variable depth but often on deep peat. Grazing appears limited.

4.3.5 Generally, these are species-poor stands dominated by tall rushes; soft rush in the M6c *Juncus effusus* sub-community and sharp-flowered rush in the M6d *Juncus acutiflorus* sub-community. Star sedge and heath bedstraw are often present, and sometimes associates such as marsh violet and water-blinks. Typically for this community, the bryophyte layer is luxuriant, with abundant flat-topped bog-moss and common haircap, as well as blunt-leaved, cow-horn, and spiky bog-mosses.

4.3.6 There are also limited stands of the M6a *Carex echinata* and M6b *Carex nigra – Nardus stricta* sub-communities in Study Area 2. These are sedge-dominated, composed of carnation sedge and star sedge over flat-topped or blunt-leaved bog-moss. Associates include common cottongrass, tormentil, glaucous sedge, marsh thistle, and marsh violet.

4.4 E2.2 Basic Flush

M10 *Carex dioica – Pinguicula vulgaris* mire

4.4.1 Only one example of this type of species-rich flush was recorded, located as an open flush line through moorland on moderate slopes in the north of the Site (see **Target Note 15**). Brown mosses and slender cow-horn bog-moss are the most obvious features of this flush, together providing a majority of the cover. Herbs are frequent and include dioecious sedge, tawny sedge, glaucous sedge, round-leaved sundew, and bog asphodel.

4.5 E2.3 Bryophyte Dominated Spring

M32 *Philonotis fontana - Saxifraga stellaris* spring

4.5.1 This community was recorded in two locations within the southeast of the Site (see **Target Note 31**). Water emerges from the ground and flows downhill through peat haggs, likely influencing the mire vegetation further down in the hagg systems (and which would therefore represent GWDTE). The smaller, higher altitude stand of this community is less abundantly vegetated, with water flowing over bare peat to a large extent. The larger stand is more abundantly vegetated.

4.5.2 These springs themselves are small, covering a few square metres of deep, waterlogged peat. Although this community is variable in composition, several bryophytes are common to both stands,

notably fountain apple-moss, marsh forklet-moss, dotted thyme-moss, pointed pear-moss, and a little cow-horn bog-moss. Pellia liverwort (likely overleaf pellia) is also abundant in the larger (downhill) stand. Vascular plants are sparse, but common to both stands is abundant to frequent water-blinks, as well as occasional bulbous rush, bog pimpernel, lesser spearwort, and water starwort. In addition, there is a little ivy-leaved crowfoot in the larger stand.

4.6 D2 Wet Heath

M15 *Tricophorum germanicum - Erica tetralix wet* heath

4.6.1 This community has a limited and patchy distribution on the Site. One patch occurs at the summit of a hill in Study Area 1 where there is an area of eroding blanket bog on a mosaic of shallow peat. The areas of shallow peat still retain a bog-like plant community, with hare's-tail cottongrass still being present. Otherwise, the vegetation contains a high abundance of common cottongrass and sedges like carnation sedge, and ericoids such as common heather and cross-leaved heath.

4.6.2 Wet heath also occurs as a few discrete stands on thin and often damaged (burnt) peats within Study Area 3. Acute-leaved and flat-topped bog-mosses can be common and occasionally bog myrtle can be abundant, but in general these stands are species-poor. Given the damaged nature of these stands, bare peat can be prominent. These stands resemble the M15b typical sub-community, or the M15c *Cladonia* sub-community where on thinner, drier peats with abundant reindeer lichen.

4.6.3 An area of species-rich M15, with scattered eared willow, juniper, and bog-myrtle is found in the north-western section of Study Area 2 (see **Target Note 38** and **Table 8.6, Annex 2**).

4.7 E1.8 Dry Modified Bog

H9 *Calluna vulgaris - Deschampsia flexuosa* heath

4.7.1 This community occurs as one small stand in Study Area 3, where an area of gently sloping bog on relatively shallow peat has been severely burned. The peat surface appears dry and crusty, and the vegetation is regenerating, but with much bare peat still visible beneath the plants. The community is species-poor, matching the description of the H9b *Vaccinium myrtillus - Cladonia spp.* sub-community (Averis *et al*. 2004). It consists of common heather, bilberry and cowberry, with occasional examples of wavy hairgrass, cross-leaved heath, crowberry, and scarce tussocks of hare's-tail cottongrass. Bryophytes are very scarce, with the exception of a little heath star-moss and encrusting lichens.

4.8 E1.6.1 Blanket Bog

M17 *Tricophorum germanicum – Eriophorum vaginatum blanket* mire

4.8.1 The M17 blanket mire community is present as several stands (including a relatively extensive area) within the lower lying areas in Study Area 2, between areas of conifer plantation and birch woodland, either as pure stands of M17 or in a mosaic with other forms of blanket mire (M19). The mire surface appears to be degraded (due to grazing and/or burning management) and lacks the characteristic hummock-hollow profile of high-quality examples of this type of blanket mire. However, is likely to be on peat of >0.5 m deep.

4.8.2 Common heather and hare's-tail cottongrass are abundant, though there is also characteristically frequent deergrass and papillose bog-moss that differentiates this from the M19 blanket mire. Other associates include cross-leaved heath, round-leaved sundew, and bog asphodel.

M19 *Calluna vulgaris - Eriophorum vaginatum* mire

4.8.3 This bog community covers the vast majority of the Site, especially on the higher ground, becoming more patchy lower down where the peat depth trails off and is replaced by dry heath and woodland.

Patches of M6c mire are scattered across its surface where the ground becomes wetter due to surface water flow. The vegetation is characterised by tussocks of hare's-tail cottongrass with large clumps of common heather and some sparse cross-leaved heath. Acute-leaved bog moss is a constant, and glittering wood-moss, red-stemmed feather-moss, and reindeer lichen are all common associates. Bilberry, crowberry, and wavy hairgrass also occur in small amounts. This community is best classified as the M19a *Erica tetralix* sub-community.

4.8.4 The community occurs on deep peat (extending to several metres in places) but is extensively hagged, causing a drain effect on the areas of bog surrounding the haggs and reducing the peat moisture to an extent so that the ground surface is generally quite dry, only really being damp in the runnels between cottongrass tussocks. Grazing appears moderate, particularly evident on the heather. Many of the erosion gullies within the M19 are noted to be bare of vegetation and therefore correspond to the E4 'Bare Peat' Phase 1 habitat classification.

4.9 B1.1 Acid Grassland – Unimproved and B1.2 Acid Grassland – Semi-improved

U4 *Festuca ovina - Agrostis capillaris* grassland

4.9.1 This acid grassland is present in mosaic with other habitats in narrow bands along watercourses in Study Areas 1 and 2, and also as pasture fields close to Lynemore cottage. Grazing pressure appears reasonably high from wild deer and sheep.

4.9.2 Two sub-communities are present in the Study Area: U4a typical and U4b *Holcus lanatus – Trifolium repens*. The vegetation associated with U4a is generally a species-poor grassland with the sward a mixture of common bent, sweet vernal grass, and a little mat-grass. Associates are few with the most common being heath bedstraw, and there is also frequent springy turf-moss. The U4b sub-community is present in pasture fields and is characterised by a sward dominated by sheep's fescue, sweet vernal grass and Yorkshire fog, with abundant springy turf-moss and frequent heath bedstraw, yarrow, and common mouse-ear.

4.9.3 A few areas of this grassland community in Study Area 2 were found to show additional signs of agricultural improvement and have thus been assigned to the B1.2 acid grassland – semi-improved Phase 1 habitat type.

U5 *Nardus stricta - Galium saxatile* grassland

4.9.4 This grassland is restricted in occurrence within the Site, occurring in small patches in Study Areas 2 and 3.

4.9.5 In Study Area 3 it occurs only as one small stand, in a steep-sided gully which also contains dry heath and juniper scrub. This community clothes the slope in the lee of the prevailing wind and appears to be used for shelter by sheep and deer. Grazing of bilberry and a few scarce common heather shoots is apparent. The vegetation is dominated by mat-grass, with occasional wavy hairgrass and sheep's fescue. Heath rush, bilberry, cowberry, and hard fern are all occasional to frequent. Heath bedstraw and tormentil occur frequently. The fairly damp nature of this north-easterly-facing stand is reflected in the bryophyte layer, which contains acute-leaved bog-moss in addition to pleurocarpous mosses such as glittering wood-moss and red-stemmed feather-moss, and the liverwort bifid crestwort.

4.9.6 In Study Area 2 this community is found in association with other grasslands in a few narrow bands along lowland watercourses. The vegetation is species-poor and dominated by mat-grass, with community constants including tormentil and heath bedstraw. Common haircap and heath wood-rush are also abundant, which is typical of the U5b *Agrostis canina – Polytrichum commune* sub-community.

4.10 B5 Marshy Grassland

M23 *Juncus effusus/acutiflorus – Galium palustre rush* pasture

4.10.1 M23 rush pasture is restricted in occurrence on the Site, only forming stands within shallow valleys between blocks of conifer plantation in Study Area 2. This community is species-poor. Soft rush is dominant and there are a few associates at low cover including marsh thistle, common sedge, mat grass, and common cottongrass. This matches the M23b *Juncus effusus* sub-community.

4.11 A1.1.1 Broadleaved Woodland - Semi-Natural

W4 *Betula pubescens – Molinia caerulea* woodland

4.11.1 Wet woodland best described as W4 has only been recorded in one small stand, on the fringes of a larger area of W17 woodland in Study Area 2. Downy birch is the only canopy species present though juniper is also present in the understorey. The ground flora is dominated by a carpet of flat-topped bog-moss with soft-rush. Other associates are limited but include chickweed wintergreen and common dog-violet. Though lacking purple moor-grass this vegetation seems to fit best into the W4b *Juncus effusus* sub-community.

W17 *Quercus petraea - Betula pubescens - Dicranum majus* woodland

4.11.2 This woodland community is found on north facing slopes, to the north and northeast of the Site. The canopy is dominated by downy birch, with some gnarled mature trees present, and saplings are fairly common. Eared willow, silver birch, and rowan are occasional but entirely absent in the northeast section. The canopy averages 10 m in height and the trees are quite spread apart, creating an open woodland feel with plenty of light reaching the understorey. Juniper is quite abundant at the shrub layer but ericoids dominate, primarily common heather and bilberry with some cowberry and crowberry. The ground layer is a thick cover of mosses including glittering wood-moss, big shaggy-moss, red-stemmed feather-moss, and occasionally acute-leaved bog-moss. Herbs and ferns are represented by hard fern, tormentil, and wood-sorrel. This most closely matches the W17d *Rhytidiadelphus triquetrus* sub-community.

4.12 A2 Scrub

4.12.1 W19 *Juniperus communis ssp. communis - Oxalis acetosella* woodland

4.12.2 This community occurs locally in Study Areas 1 and 2 on steep, well-drained slopes and within the burn gullies. In some areas it occurs as a mosaic with dry heath or around the peripheries and understorey of woodland, whilst in other areas it forms independent areas of dense scrub. In particular, on the lower slopes in the north of the Site, juniper is wholly dominant and in places forms an almost continuous canopy with only occasional downy birch. The shrubs also vary in their condition, some reaching 2 to 3m in height, whereas in the southeast the shrubs are low (up to 1m) and moribund.

4.12.3 In clearings and under less dense canopy there is a ground layer which frequently includes wood sorrel, cowberry, and abundant bryophytes including common tamarisk-moss, common haircap, glittering wood-moss and big shaggy-moss. This type of juniper scrub fits well in the W19a *Vaccinium vitis-idaea - Deschampsia flexuosa* sub-community.

4.13 A1.2.2 Coniferous Woodland – Plantation

4.13.1 There are blocks of commercial forestry in Study Area 2, mostly Sitka spruce and lodgepole pine. The trees are around 12 m in height and very densely planted, meaning that the understorey is very shaded and devoid of vegetation.

4.14 G2.4 Running Water – Dystrophic

4.14.1 The Site has a several burns, which are generally fast-flowing and shallow, running over bedrock, boulders and pebbles. These are detailed in the Target Notes in **Annex 1**.

5 RESULTS: NOTABLE SPECIES

5.1.1 The shrub species juniper (occurring in Study Areas 1 and 2) is included in the Scottish Biodiversity List as a species of principal importance for biodiversity conservation in Scotland.

5.1.2 Heath dog-violet was recorded in a quadrat of H12a dry heath in Study Area 1 (grid reference NH 74784 33700), a species which is listed as Near Threatened in the Vascular Plant Red Data List for Great Britain (revised Feb 2021).

5.1.3 The survey did not find any plant species that are listed under Schedule 8 of the Wildlife and Countryside Act 1981 as having special protected status.

5.1.4 The survey also did not find any invasive non-native plant species that are listed on Schedule 9 of the Wildlife and Countryside Act.

6 DISCUSSION

6.1.1 **Table *6.1*** shows the NVC communities identified at the Site that have any designations relating to habitat protection status or potential groundwater dependence.

6.2 Annex I Habitats

6.2.1 The dry heath communities on the Site all fall under the '4030 European dry heaths' Annex I habitat type. H13 and H16 heath can correspond to '4060 Alpine and Boreal heaths'. In this case however, though the communities appear influenced by their high and exposed position on the hill summits, it is likely that their composition is also a reflection of damage from burning. It is considered possible that they may revert to H12 given time (HEL, 2024), and so are also assigned to the '4030 European dry heaths' category in this instance. The M15 wet heath communities correspond to '4010 Northern Atlantic wet heaths with *Erica tetralix*'.

6.2.2 It is considered that the M17 and M19 blanket bog communities qualify as Annex I '7130 Blanket bogs' habitat type, despite the signs of modification and peat erosion noticed across the bog surface. To qualify for this habitat type the blanket bog must be 'active' (peat forming), which is indicated by an abundance of peat-forming species particularly bog-mosses. Based on the quadrat data collected from these communities (see **Annex 2**) acute-leaved and papillose bog-mosses were recorded in most quadrats and at reasonable abundances. Furthermore, hare's-tail cottongrass occurred as a co-dominant with heather in these habitats, matching the description of 'State 5 (Active)' in guidance published by Moors for the Future (2017). However, on the basis of the definition of active blanket bog the eroded gully floors, which are bare of vegetation, are assigned as 'E4 – Bare Peat' are excluded as both Annex I and as Priority Peatland Habitat.

6.2.3 The W19 scrub community corresponds to '5130 Juniperus communis formations on heaths'. W17 can be included in '91A0 Old sessile oak woods with Ilex and Blechnum' but is not in this case, due to the absence of any oak recorded in the woodland.

6.3 Scottish Biodiversity List

6.3.1 The above-mentioned Annex I qualifying communities also have corresponding habitats listed on the Scottish Biodiversity List, these are 'blanket bogs' and 'upland heathland'.

6.3.2 In addition, the flush communities (M4, M5*, M6, M10) and the M32 spring community all qualify as 'upland flushes, fens, and swamps' and the W4 and W17 woodland comes under the 'upland birchwoods' habitat category, as per guidance retained from the UK BAP priority habitats descriptions (JNCC, 2024).

6.3.3 U5 *Nardus stricta - Galium saxatile* grassland is included on the Scottish Biodiversity List, currently only as a watching brief.

6.3.4 Species-rich examples M23 rush pasture can qualify as 'upland flushes, fens, and swamps' but the M23b sub-community (as occurs on the Site) is excluded from this category.

6.4 Priority Peatland

6.4.1 Based on guidance from NatureScot (2023) M17 and M19 blanket bog communities are classed as priority peatland and are communities where impacts from development have the potential to raise issues of national interest. However, the descriptions of the M17 and M19 on the Site, and the associated target notes, include obvious and widespread signs of modification and peat erosion, suggesting that these communities are not in a near-natural condition. It therefore seems unlikely that these blanket bog communities would be classed as being of national importance, although an additional peat condition assessment may be needed to quantify and confirm this. As described above, eroded gullies which are devoid of vegetation have been excluded from the priority peatland category.

6.4.2 M15 wet heath can also be classed as priority peatland, although is a community where development is unlikely to raise issues of national interest. Furthermore, the description of the M15b and M15c communities on the Site suggests that much of it is in a degraded state, fragmented, and in places only occurring on shallow peat.

6.5 Groundwater Dependent Terrestrial Ecosystems

6.5.1 Many of the extensive flush and spring features on the Site can signify groundwater dependent terrestrial ecosystems, and guidance from SEPA (2017) indicates that the M5, M6, M10 and M32 communities all have possible high groundwater dependence, though in the case of M5 and M6 actual dependence on groundwater is contingent on hydrogeological setting. The M23 rush pasture and wet W4 woodland also indicate possible high groundwater dependence and the M15 wet heath possible moderate groundwater dependence, again dependent on hydrogeological setting.

6.5.2 These classifications are preliminary and further detailed hydrological assessment is required to determine whether any of the communities in the context of the Site actually rely on groundwater. However, the field observations of spring features (M32 and M10) in the southeast of the Site is a strong indicator of at least some groundwater sources.

Table 6.1. Summary of the recorded plant communities and sub-communities with relevant conservation designations and/or potential groundwater dependence.

Phase 1 Habitat	NVC Community	NVC Sub-Community	Annex I Habitat	Scottish Biodiversity List Habitat	Priority Peatland Status*	Potential Groundwater Dependence**
D1.1 Dry Heath						
	H12 *Calluna vulgaris* - *Vaccinium myrtillus* heath	H12a typical sub-community	4030 European dry heaths	Upland Heathland	-	-
		H12b *Vaccinium vitis-idaea* - *Cladonia portentosa* sub-community	4030 European dry heaths	Upland Heathland	-	-
	H13 *Calluna vulgaris* - *Cladonia arbuscula* heath		4030 European dry heaths	Upland Heathland	-	-
	H16 *Calluna vulgaris* - *Arctosaphylos uva-ursi* heath	H16b *Vaccinium myrtillus* - *Vaccinium vitis-idaea* sub-community	4030 European dry heaths	Upland Heathland	-	-
	H21 *Calluna vulgaris* - *Vaccinium myrtillus* - *Sphagnum capillifolium* heath	H21a *Calluna vulgaris* - *Pteridium aquilinum* sub-community	4030 European dry heaths	Upland Heathland	-	-
E2.1 Acid / Neutral Flush	M4 *Carex rostrata* - *Sphagnum fallax* mire		-	Upland Flushes, Fens and Swamps	-	-
	M5* *Carex rostrata* - *Sphagnum squarrosum* mire		-	Upland Flushes, Fens and Swamps	-	High
	M6 *Carex echinata* - *Sphagnum fallax* mire	M6a *Carex echinata*	-	Upland Flushes, Fens and Swamps	-	High
		M6b *Carex nigra* – *Nardus stricta*	-	Upland Flushes, Fens and Swamps	-	High
		M6c *Juncus effusus* sub-community	-	Upland Flushes, Fens and Swamps	-	High
		M6d *Juncus acutiflorus* sub-community	-	Upland Flushes, Fens and Swamps	-	High
E2.2 Basic Flush	M10 *Carex dioica* – *Pinguicula vulgaris* mire		7230 Alkaline fens	Upland Flushes, Fens and Swamps	-	High

Phase 1 Habitat	NVC Community	NVC Sub-Community	Annex I Habitat	Scottish Biodiversity List Habitat	Priority Peatland Status*	Potential Groundwater Dependence**
E2.3 Bryophyte Dominated Spring	M32 *Philonotis fontana* - *Saxifraga stellaris* spring		-	Upland Flushes, Fens and Swamps	-	High
D2 Wet Heath	M15 *Tricophorum germanicum* - *Erica tetralix* wet heath	M15b typical sub-community	4010 Northern Atlantic wet heaths with *Erica tetralix*	Upland Heathland	Communities that are unlikely to raise issues of national interest	Moderate
		M15c *Cladonia* sub-community	4010 Northern Atlantic wet heaths with *Erica tetralix*	Upland Heathland	Communities that are unlikely to raise issues of national interest	Moderate
E1.6.1 Blanket Bog	M17 *Tricophorum germanicum – Eriophorum vaginatum* blanket mire		7130 Blanket bogs	Blanket Bogs	Priority peatland community where impacts have the potential to raise issues of national interest	-
	M19 *Calluna vulgaris* - *Eriophorum vaginatum* mire	M19a *Erica tetralix* sub-community	7130 Blanket bogs	Blanket Bogs	Priority peatland community where impacts have the potential to raise issues of national interest	-
E1.8 Dry modified bog	H9 *Calluna vulgaris* - *Deschampsia flexuosa* heath	H9b *Vaccinium myrtillus* - *Cladonia* spp. sub-community	-	[Potential of recovery to blanket bog]	-	-
B1.1 Acid Grassland	U5 *Nardus stricta* - *Galium saxatile* grassland	U5b *Agrostis canina – Polytrichum commune* sub-community	-	[Watching Brief]	-	-
B5 Marshy Grassland	M23 *Juncus effusus/acutiflorus – Galium palustre* rush pasture	M23b *Juncus effusus* sub-community	-	-	-	High
A1.1.1 Broadleaved Woodland	W4 *Betula pubescens – Molinia caerulea* woodland	W4b *Juncus effusus* sub-community	-	Upland Birchwoods	-	High

Phase 1 Habitat	NVC Community	NVC Sub-Community	Annex I Habitat	Scottish Biodiversity List Habitat	Priority Peatland Status*	Potential Groundwater Dependence**
	W17 *Quercus petraea - Betula pubescens - Dicranum majus* woodland	W17d *Rhytidiadelphus triquetrus* sub-community	-	Upland Birchwoods	-	-
A2 Scrub	W19 *Juniperus communis ssp. communis - Oxalis acetosella* woodland	W19a *Vaccinium vitis-idaea - Deschampsia flexuosa* sub-community	5130 *Juniperus communis* formations on heaths	(Protected species)	-	-

* As per guidance from NatureScot (2023). Based on vegetation communities present.

** As listed in Appendix 4 of SEPA (2017) LUPS Guidance Note 31. The categorisation of groundwater dependent terrestrial ecosystems is preliminary and is based on vegetation communities present. Confirmed categorisation is based on subsequent formal hydrological assessment.

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8 ANNEXES

8.1 Annex 1 – Phase 1 Target Notes

Table 8.1. Target Notes relating to the habitat survey reported in section 4.

Target Note	Grid Reference	Description	Photo
1	NH 74478 31750	Bog pool.	1
2	NH 74530 31649	Peat hags.	2
3	NH 74832 31510	Pond M2 bog pool community.	3
4	NH 74983 31886	Collapsed peat pipe showing deep peat.	4
5	NH 75655 32672	Burn within valley/gully. Moderate flow with peat-stained water, 1m wide x 15cm deep. Stream bed is pebbles and boulders, banks a mix grassland and soft rush.	17
6	NH 75668 32664	Gully with common heather and juniper scrub	18
7	NH 74665 32888	Large area peat hag - extensive erosion.	5
8	NH 72523 32560	Area of eroding M19 bog. Areas of shallow peat with likeness to M15c, and M6a-like flushes (with carnation sedge).	6
9	NH 73077 33831	Sedge flush on a steep slope. Small sedges are dominant (carnation, common yellow sedge) with heath rush, butterwort, tormentil, and bog-mosses (papillose, flat-topped and feathery).	7
10	NH 73166 33998	Steep gully with birch, juniper, Scots pine, and common heather.	8
11	NH 73368 33822	Juniper scrub. No significant canopy.	-
12	NH 74098 33417	Stream 1m wide x 20cm deep. Heavily peat-stained with fast steady flow and bed of gravel/pebble. M6c flush along banks.	-
13	NH 75747 32331	System of erosion gullies on M19 bog, gullies 1-1.5 m deep and 4m wide. Bare peat on sides with re-vegetated bases.	-
14	NH 76570 32765	Small patch of juniper scrub in heathy gully.	-
15	NH 76339 32855	Grazed sedge flush.	-

Target Note	Grid Reference	Description	Photo
16	NH 76123 33754	Valley stocked with pheasant and high rabbit population. Bare ground below juniper scrub due to rabbit grazing.	-
17	NH 75564 33791	Frequent cranberry in blanket bog.	-
18	NH 75968 33850	Poorly grown stand of Scots pine plantation to 5-7 m high over blanket bog vegetation.	-
19	NH 76055 34068	Poorly grown stand of Scots pine plantation to 4-9 m high over blanket bog vegetation.	-
20	NH 76381 34190	Scots pine and Sitjka spruce plantation, 6-9 m high over heathy vegetation.	-
21	NH 75778 34068	Closely planted plantation of Scot pine at c. 2 m centres with trees to 8-12 m high, with impoverished ground flora due to shading and needles.	-
22	NH 74777 34357	Area of former clear-fell which has been well cleared of brash and timber and now supports species-poor acid grassland.	-
23	NH 74852 34788	Area of former clear-fell still with a lot of brash and colonised by vegetation not akin to any NVC community with soft rush, tufted hairgrass, common heather and rosebay willowherb, reflecting disturbed and compacted soils.	-
24	NH 76456 34038	Mature Scots pine plantation with trees generally 30-40 cm dbh and >20 m tall (with some larger Sitka spruce on the edge), with impoverished field layer due to shading and needles.	-
25	NH 76273 34001	Former coniferous plantation now clear-felled with brush and vegetation not akin to NVC types.	-
26	NH 76663 33985	Stand of mixed conifers and broadleaves with mature Scots pine and silver birch.	-
27	NH 76584 34048	Dense stand of Sitka spruce planted at c. 1.5 m centres with no field layer because of shading and needles.	-
28	NH 75383 31649	Partially revegetated hag with small watercourse.	11
29	NH 75454 31662	Hag containing acidic flush.	12
30	NH 75632 31500	Partially revegetated hag with some bare/eroding peat.	13
31	NH 75695 31823	Bryophyte dominated spring.	19
32	NH 75502 31954	Pool of likely calcium-rich water movement within hag system. Common mare's-tail reasonably abundant here only.	14

Target Note	Grid Reference	Description	Photo
33	NH 75906 31947	Bog pool with extensive bog-moss.	20
34	NH 75789 32261	Hag system with much exposed peat.	15
35	NH 75649 32162	Revegetating hag system with exposed peat and some standing water.	16
36	NH 75589 32086	Hag system with exposed bare peat.	21
37	NH 75503 31855	Small spring within peat hag.	22
38	NH 74757 34103	Stand of species-rich M15 wet heath.	-

8.2 Annex 2 – NVC Survey Full Results

Table 8.2. The DOMIN scale, used to classify the abundance of plants in the NVC surveys.

DOMIN code	Approximate percentage cover in quadrat
10	91 - 100%
9	76 – 90%
8	51 – 75%
7	34 – 50%
6	26 – 33%
5	11 – 25%
4	4 – 10%
3	<4% many individuals
2	<4% a few individuals
1	<4% one or two individuals

Table 8.3 – 8.19. All data recorded in the NVC survey, with each table representing a specific NVC community. For each quadrat, a full plant species inventory is included in which the abundance of each species is represented using the DOMIN scale.

Phase 1 habitat type	2.1 Flush and spring – acid/neutral
NVC Community	M4 *Carex rostrata - Sphagnum fallax* mire
Surveyor	HEL
Quadrat no. (Raw data)	63
Grid reference	NH 76120 34210
Species	**Cover (DOMIN)**
Cardamine pratensis	1
Carex nigra	4
Carex rostrata	7
Equisetum palustre	2
Juncus effusus	5
Polytrichum commune	5
Rumex acetosa	4
Sphagnum fallax	6
Sphagnum palustre	4

Table 8.4

Phase 1 habitat type	2.2 Flush and spring – basic
NVC Community	M10 *Carex dioica – Pinguicula vulgaris* mire
Surveyor	HEL
Quadrat no. (raw data)	13
Grid reference	NH 76273 33009
Sub-community	M10a
Species	**Cover (DOMIN)**
Brown mosses	7
Carex dioica	4
Carex flacca	6
Carex hostiana	5
Carex nigra	4
Drosera rotundifolia	2
Erica tetralix	3
Eriophorum angustifolium	3
Narthecium ossifragum	3
Pinguicula vulgaris	3
Potentilla erecta	3
Sphagnum cf. subsecundum	5

Table 8.5

Phase 1 habitat type	2.1 Flush and spring – acid/neutral					
NVC Community	M6 *Carex echinata - Sphagnum fallax* mire					
Surveyor	HEL	HEL	HEL	HEL	HEL	HEL
Quadrat no. (raw data)	22	27	30	36	40	73
Grid reference	NH 76619 33772	NH 72748 34417	NH 72676 34139	NH 76419 33867	NH 75921 33770	NH 74946 34261
Sub-community	M6a/b	M6a/b	M6a/b	M6a/b	M6d	M6d
Species	**Cover (DOMIN)**					
Anthoxanthum odoratum	6	2				
Aulacomnium palustre		4		4		
Betula sp. (seedling)				3		
Calliergon cuspidata					4	
Calluna vulgaris		4				
Caltha palustis	3			3		
Cardamine pratensis					2	
Carex demissa			3			
Carex dioica			3			
Carex echinata		5	6	3		

Phase 1 habitat type	2.1 Flush and spring – acid/neutral					
NVC Community	M6 *Carex echinata - Sphagnum fallax* mire					
Carex flacca		3		3		
Carex nigra	6			3	5	
Carex panicea	8	7	5	5		
Carex rostrata					4	
Cirsium palustre	2			2	1	
Drosera rotundifolia			2			
Epilobium palustre	2					
Erica tetralix		3		3		
Eriophorum angustifolium	3	3	6	3		
Eriophorum vaginatum		2				
Festuca rubra	3					
Filipendula ulmaria				4		
Galium palustre					2	
Holcus lanatus				4		
Juncus acutiflorus					8	8
Juncus bulbosus			4			
Juncus effusus	4			3	4	
Luzula spp.	2					
Myrica gale						4
Nardus stricta				3		
Narthecium ossifragum			3			
Polytrichum commune						4
Potamogeton polygonifolius			2			2
Potentilla erecta	2	2	3			
Rumex acetosa					2	
Sphagnum capillifolium		5		5		
Sphagnum cf. subsecundum			5			
Sphagnum fallax	8	5			4	8
Sphagnum palustre		6	5	5		
Succissa pratensis			2			
Trifolium repens	3					
Viola palustris	3	2				2

Table 8.6

Phase 1 habitat type	D2 Wet dwarf shrub heath		
NVC Community	M15 *Tricophorum germanicum – Erica tetralix* wet heath		
Surveyor	HEL	HEL	HEL
Quadrat no. (raw data)	23	56	71
Grid reference	NH 76545 33845	NH 76093 33949	NH 74757 34103
Sub-community	M15c	M15b	M15*
Species	**Cover (DOMIN)**		
Betula pubescens			4
Calluna vulgaris	8	8	5
Carex nigra	1		
Cladonia portentosa	5		
Cladonias		3	
Equisetum sylvaticum			2
Erica tetralix			5
Eriophorum angustifolium			1
Eriophorum vaginatum			2
Hylocomium splendens		3	
Juncus squarrosus		2	
Juniperus communis			4
Lysimachia europaea			1
Molinia caerulea		4	5
Myrica gale			7
Narthecium ossifragum			2
Potentilla erecta			3
Salix aurita			5
Sphagnum fallax			6
Sphagnum palustre			5
Sphagnum papillosum	2		
Sphagnum capillifolium		5	3
Succissa pratensis			1
Trichophorum germanicum	7	5	4
Triglochin palustris			1

M15* = species-rich example

Table 8.7

Phase 1 habitat type	E1.6.1 Blanket bog					
NVC Community	M17 *Tricophorum germanicum – Eriophorum vaginatum* blanket mire					
Surveyor	HEL	HEL	HEL	HEL	HEL	HEL
Quadrat no. (raw data)	45	47	51	54	64	75
Grid reference	NH 75485 33835	NH 75581 33774	NH 75949 33896	NH 76105 33889	NH 75784 34037	NH 75610 34248
Sub-community	M17a	M17a	M17a	M17a	M17a	M17a
Species	**Cover (DOMIN)**					
Calluna vulgaris	6	4	7	6	5	5
Cladonia portentosa	2		4	3		
Drosera rotundifolia	2	2		2	3	2
Erica tetralix	5	6		5	5	6
Eriophorum angustifolium			2	2		
Eriophorum vaginatum	7	7	7	7	7	6
Hylocomium splendens	4					
Juncus squarrosus			2	2		
Myrica gale		5				5
Narthecium ossifragum	2	2			2	
Polytrichum sp.	2		2		2	
Sphagnum cuspidatum				4		
Sphagnum fallax		4				
Sphagnum papillosum	4	6	5	6	6	
Sphagnum capillifolium	4	4	6	5		5
Tricophorum germanicum	5	4	5	5		5
Vaccinium myrtillus	2					

Table 8.8

Phase 1 habitat type	D1.1 Dry dwarf shrub heath - acid				
NVC Community	H13 *Calluna vulgaris* - *Cladonia arbuscula* heath				
Surveyor	JM	JM	JM	JM	JM
Quadrat no. (raw data)	Q1	Q2	Q3	Q4	Q5
Grid reference	NH 76140 32483	NH 76162 32475	NH 76171 32465	NH 76207 32447	NH 76168 32425
Species	**Cover (DOMIN)**				
Calluna vulgaris	8	8	8	8	7
Carex bigelowii			3		4
Cladonia arbuscula	3	3	2	4	5
Cladonia portentosa	5	4	4	4	5
Cladonia rangiferina	3	2	3	4	4
Cladonia uncialis	2	1		2	3
Empetrum nigrum	4	2			4
Erica cinerea		5	4	4	
Eriophorum vaginatum					2
Hypnum jutlandicum	5	5	4	4	4
Hypogymnia physodes			3		
Polytrichum juniperinum		3			3
Racomitrium lanuginosum	5	4	5	5	4
Tricophorum germanicum			2		
Vaccinium myrtillus	4	2	2		

Table 8.9

Phase 1 habitat type	D1.1 Dry dwarf shrub heath - acid						
NVC Community	H16 *Calluna vulgaris – Arctostaphylos uva-ursi* heath						
Surveyors	MW	MW	MW	MW	MW	HEL	HEL
Quadrat no. (raw data)	1	2	29	30	31	4	25
Grid reference	NH 74429 32039	NH 74434 31976	NH 73652 32343	NH 73684 32326	NH 74264 32181	NH 76266 32535	NH 72906 34464
Sub-community	H16b	H16b	H16b	H16b	H16b	H16	H16
Species	**Cover (DOMIN)**						
Arctostaphylos uva-ursi		4	4	5		3	3
Calluna vulgaris	7	8	7	8	6	7	8
Carex binervis							2
Carex nigra			3				
Carex sp.	3						
Cetraria islandica		1		1			
Cladonia arbuscula	3	4					
Cladonia portentosa	7	7	9	7	8		2
Cladonia sp.	4	4	3	3	4	7	
Empetrum nigrum	2	3	4	4	3		
Erica tetralix							3
Genista anglica						2	
Huperzia selago	2					3	
Pleurozium schreberi		3					3
Polytrichum juniperinum		3	2		5		
Racomitrium lanuginosum	4	3	5	3	4	4	3
Sphagnum capillifolium							3
Sphagnum fallax			4				
Trichophorum germanicum	2						
Vaccinium myrtillus	1	3	3	2	3		
Vaccinium vitis-idaea					2		

Table 8.10

Phase 1 habitat type	B5 Marshy Grassland			
NVC Community	M23 *Juncus effusus/acutiflorus – Galium palustre* rush pasture			
Surveyor	HEL	HEL	HEL	HEL
Quadrat no. (raw data)	55	58	61	81
Grid reference	NH 76212 33930	NH 76290 34093	NH 76334 34272	NH 76545 34079
Sub-community	M23b	M23b	M23b	M23b
Species	**Cover (DOMIN)**			
Adjuga reptans				4
Cardamine pratensis				2
Carex nigra		4	4	4
Cirsium palustre	1	1	1	2
Deschampsia cespitosa				4
Dryopteris dilatata	1			
Eriophorum angustifolium		2	2	
Galium saxatile	2			
Holcus lanatus				4
Juncus effusus	10	8	8	8
Juncus squarrosus	2			
Luzula spp.	2			
Nardus stricta		6	5	
Polytrichum commune	4	4	4	
Potentilla erecta	2			
Rannunculus repens				4
Rumex acetosa				4
Sphagnum fallax		4	4	
Valeriana officinalis				5

Table 8.11

Phase 1 habitat type	B1.1 Acid grassland - unimproved	
NVC Community	U4 *Festuca ovina - Agrostis capillaris - Galium saxatile* grassland	
Surveyor	HEL	HEL
Quadrat no. (raw data)	37	60
Grid reference	NH 76220 33819	NH 76350 34256
Sub-community	U4b	U4a
Species	**Cover (DOMIN)**	
Achillea millefolium	3	2
Agrostis capillaris		7
Anthoxanthum odoratum	5	5
Carex piluifera	3	1
Cerastium fontanum	4	
Festuca ovina	5	
Galium saxatile	4	5
Holcus lanatus	4	
Luzula sp.	4	3
Nardus stricta		5
Polygala serpyifolia		2
Polytrichum commune	4	
Potentilla erecta		2
Rhytididelphus squarrossus	6	5
Viola riviniana	3	

Table 8.12

Phase 1 habitat type	B1.1 Acid grassland - unimproved	
NVC Community	U5 *Nardus stricta - Galium saxatile* grassland	
Surveyor	HEL	HEL
Quadrat no. (raw data)	62	74
Grid reference	NH 76212 34231	NH 75200 34220
Sub-community	U5b	U5b
Species	**Cover (DOMIN)**	
Achillea millefolium		2
Agrostis canina	5	5
Anthoxanthum odoratum		3
Erica tetralix	4	
Eriophorum vaginatum	4	
Galium saxatile		4
Luzula sp.	2	2
Nardus stricta	7	7
Polytrichum commune	5	7
Potentilla erecta	4	
Ranunculus repens		2
Rumex acetosa		2

Table 8.13

Phase 1 habitat type	A1.1.1 Semi-natural broadleaved woodland
NVC Community	W4 *Betula pubescens – Molinia caerulea* woodland
Surveyor	HEL
Quadrat no. (raw data)	48
Grid reference	NH 75711 33677
Sub-community	W4c
Species	**Cover (DOMIN)**
Betula pubescens	8
Carex nigra	3
Eriophorum angustifolium	1
Juncus effusus	7
Juniperus communis	1
Lysimachia europaea	2
Polytrichum sp.	3
Sphagnum fallax	8
Viola riviniana	2

Table 8.14

Phase 1 habitat type	A1.1.1 Semi-natural broadleaved woodland								
NVC Community	W17 *Quercus petraea – Betula pubescens – Dicranum majus* woodland								
Surveyor	HEL	HEL	HEL	HEL	HEL	HEL	HEL	HEL	HEL
Quadrat no. (raw data)	11	17	18	21	24	35	42	69	32
Grid reference	NH 76227 33022	NH 76822 33421	NH 76614 33194	NH 76573 33462	-	NH 75813 33320	NH 75725 33466	NH 74533 34022	NH 73104 34053
Sub-community	W17d	W17d	W17d	W17d	W17d	W17d	W17d	W17d	W17a
Species	**Cover (DOMIN)**								
Agrostis capillaris		3			4				
Anemone nemorosa								2	1
Anthoxanthum odoratum					4				
Betula pubescens	5	8	7	7	8	8	8	7	7
Blechnum spicant		2				4	2	2	3
Calluna vulgaris	9	6	6	8		5	7	5	
Carex flacca		1							
Carex nigra					2		3		
Deschampsia flexuosa						3			3
Equisetum sylvaticum	2								
Eriophorum angustifolium			1						
Gymnocarpium dryopteris						4		2	1
Hieracium sp.									2
Holcus lanatus						3			
Hylocomium splendens		8	8	7	6	8	5	6	6
Isothecium myosuroides								5	6
Juncus effusus	2								
Juniperus communis	4	6	5	3	5	4	3	5	
Luzula pilosa							1		
Luzula sp.								1	
Luzula sylvatica					3				3
Lysimachia europaea							2		
Lysimachia nemorum		2							
Melampyrum pratensis		1				2			
Neottia cordata							1		
Oreopteris limbosperma		2							
Oxalis acetosella	2	2			3		2	3	5
Pleurozium schreberi	3	3							
Polypody									2
Polytrichum commune				4					
Polytrichum sp.	4						2		
Potentilla erecta					3	2			

Phase 1 habitat type	A1.1.1 Semi-natural broadleaved woodland								
NVC Community	W17 *Quercus petraea – Betula pubescens – Dicranum majus* woodland								
Ranunculus repens		2							
Rhytidiadelphus loreus									6
Rhytidiadelphus squarrosus	3								
Rhytidiadelphus triquetrus		4			5	3	5	4	4
Salix aurita			5						
Salix cinerea				3					
Sorbus aucuparia									8
Sphagnum capillifolium	5		5	8					
Sphagnum fallax							4	2	
Sphagnum palustre	2								
Thuidium tamariscinum	5								
Vaccinium myrtillus	4	6	7	7	7	7	5	7	
Vaccinium vitis-idaea	4	6	6	4	4	5	5	5	
Viola riviniana		2			3		1		

Table 8.15

Phase 1 habitat type	A2 Scrub	
NVC Community	W19 *Juniperus communis ssp. communis – Oxalis acetosella* woodland	
Surveyor	HEL	HEL
Quadrat no. (raw data)	9	34
Grid reference	NH 76335 32855	NH 75940 33546
Sub-community	W19a	W19a
Species	**Cover (DOMIN)**	
Achillea millefolium		1
Agrostis capillaris	3	
Betula pubescens	1	3
Calluna vulgaris		6
Gymnocarpium dryopteris		4
Holcus lanatus		4
Hylocomium splendens		6
Juniperus communis	9	8
Luzula sylvatica		2
Oxalis acetosella	3	6
Plagiothecium undulatum	2	
Pleurozium schreberi		4
Polytrichum commune	4	3
Rhytididelphus triquetrus	4	
Spgahnum capillifolium	4	
Thuidium tamariscinum	8	
Vaccinium myrtilus	3	
Vaccinium vitis-idaea	3	5

Table 8.16

Phase 1 habitat type	2.1 Flush and spring – acid/neutral																
NVC Community	M6c *Carex echinata - Sphagnum fallax* mire (*Juncus effusus* sub-community)																
Surveyor	JM	JM	JM	JM	JM	MW	MW	MW	MW	MW	HEL	HEL	HEL	HEL	HEL	HEL	HEL
Quadrat no. (raw data)	Q1	Q2	Q3	Q4	Q5	6	7	15	17	23	16	26	39	49	67	72	76
Grid reference	NH 75453 31665	NH 75496 31991	NH 75501 31989	NH 75498 31867	NH 75463 31697	NH 74977 31875	NH 75014 31916	NH 75289 33374	NH 74461 33596	NH 72888 33622	NH76 90533 300	NH72 77534 450	NH75 99033 780	NH75 80933 685	NH74 79334 389	NH74 88134 196	NH75 85134 395
Species	**Cover (DOMIN)**																
Agrostis sp.										3							
Anthoxanthum odoratum													3				
Betula sp. (seedling)											1						
Carex curta				3													
Carex echinata	3	3	4	4	4												
Carex nigra														4		4	4
Cerastium fontanum									1								
Cirsium palustre								1									
Comarum palustre																	1
Deschampsia flexuosa	4						3										
Epilobium palustre		4	3						1								
Equisetum palustre																1	
Eriophorum angustifolium	3				4					3						2	2
Eriophorum vaginatum	4	4	3	4	5									2			4
Galium palustre																	4
Galium saxatile			3	4	5	1	3	3	3	3			3				
Holcus lanatus															2		
Juncus acutiflorus													3				

Phase 1 habitat type	2.1 Flush and spring – acid/neutral																
NVC Community	M6c *Carex echinata - Sphagnum fallax* mire (*Juncus effusus* sub-community)																
Juncus bulbosus	3		2	3	2												
Juncus effusus	8	9	9	9	8	9	7	7	7	7	9	6	8	8	8	8	8
Juncus squarrosus	4												4				
Luzula spp.													2				1
Lysimachia europaea											3			4			
Montia fontana		2	3														
Pleurozium schreberi									3				4				
Polytrichum commune	6	5	4	4	6	5	7	4	5	5	3	8	5	4	6	7	
Potentilla erecta											1						
Ranunculus repens									3								
Rhytidiadelphus squarrosus									3								
Rumex acetosa									3								
Salix aurita																4	
Sphagnum capillifolium	4																
Sphagnum denticulatum	4		3														
Sphagnum fallax	8	8	7	8	7	8	6	9	8	9	9			8	5	5	8
Sphagnum palustre	4	4		4	5			3				7					
Sphagnum squarrosum		4	4	3					4								
Trifolium repens									3								
Viola palustris									2					2			2

Table 8.17

Phase 1 habitat type	E1.6.1 Blanket bog																		
NVC Community	M19a *Calluna vulgaris – Eriophorum vaginatum* mire (*Erica tetralix* sub-community)																		
Surveyor	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	HEL	HEL	HEL	HEL	HEL	HEL	HEL	HEL	HEL
Quadrat (raw data)	3	8	18	19	20	21	22	26	27	28	2	5	7	19*	29	41	43	44	53
Grid reference	NH 74544 31675	NH 75251 32274	NH 74556 33278	NH 74654 32846	NH 74514 32329	NH 72764 32652	NH 73008 33262	NH 73714 33666	NH 74173 33084	NH 73504 32930	NH 75871 32426	NH 76462 32686	NH 76915 32931	NH 76450 33310	NH 72664 34328	NH 75828 33569	NH 75592 33459	NH 75474 33794	NH 76069 33860
Species	**Cover (DOMIN)**																		
Betula pubescens (sapling)																4	2		
Calluna vulgaris	8	7	7	6	6	7	7	7	8	8	6	7	7	9	7	7	8	7	8
Carex nigra																		1	2
Carex sp.														3					
Cladonia arbuscula			3		3														
Cladonia portentosa	3		4	8	7	7	9	6			7	4		2	2				
Cladonia sp.	3			3		5	3												
Empetrum nigrum	3	4	4		3			3	3	3									
Erica tetralix		3	4	3	4	3	3	3	3	3	3	2	2		4	5	2	5	4
Eriophorum angustifolium	3							3	3									2	
Eriophorum vaginatum	6	7	7	7	7	6	8		7	7	6	8	8	3	8	5	4	5	5
Hylocomium splendens	5	5							7	8			4	7		4		4	
Hypnum jutlandicum				4	3														
Hypnum sp.													2						
Juncus squarosus						3										2		1	2
Pinus sylvestris (sapling)																1			
Pleurozium schreberi	5	5	5		4			4	4	3			2						

Phase 1 habitat type	E1.6.1 Blanket bog																		
NVC Community	M19a *Calluna vulgaris – Eriophorum vaginatum* mire (*Erica tetralix* sub-community)																		
Polytrichum commune		1																	
Polytrichum sp.																	4		
Pseudoscleropodium purum															1				
Racomitrium lanuginosum				4		3					2								
Rhytidiadelphus loreus																	2		
Rhytidiadelphus squarrosus														3					
Rhytidiadelphus triquetrus			3																
Rubus chamaemorus												2							
Salix aurita													2						
Sphagnum capillifolium	5	4	5	5	3	5		5			3	8	5	7	8	2	4	4	4
Sphagnum fallax						4		4								6	4	4	
Sphganum papillosum												2							
Trichophorum germanicum						3					2		2					4	
Vaccinium myrtillus					4				3	3					2	2	5		
Vaccinium vitis-idaea		3							4							2			

* Quadrat identified as M19 mire / H21 heath

Table 8.18

Phase 1 habitat type	D1.1 Dry dwarf shrub heath - acid																
NVC Community	H12 *Calluna vulgaris* - *Vaccinium myrtillus* heath																
Surveyor	MW	MW	MW	MW	MW	MW	MW	MW	MW	JM	JM	JM	JM	JM	HEL	HEL	HEL
Quadrat no. (raw data)	4	5	32	33	34	11	16	24	25	Q1	Q2	Q3	Q4	Q5	3	28	31
Grid reference	NH 74542 31652	NH 74692 31527	NH 74447 31779	NH 74454 31758	NH 74482 31721	NH 75671 32924	NH 74784 33700	NH 72845 33786	NH 73166 33990	NH 75918 31977	NH 75917 31988	NH 75926 31970	NH 76295 32309	NH 76138 32400	NH 75814 32785	NH 72759 34441	NH 72938 34263
Sub-community	H12a	H12a	H12a	H12a	H12a	H12a	H12a	H12a	H12a	H12a	H12a	H12a	H12a	H12a	H12b	H12b	H12b
Species	**Cover (DOMIN)**																
Blechnum spicant							3	4	4		4	4		3			
Calluna vulgaris	9	8	9	9	9	8	7	9	8	9	9	10	9	8	9	9	9
Carex binervis																	2
Carex nigra																	1
Cirsium palustre							3										
Cladonia arbuscula		4			3												
Cladonia portentosa	6	6	3	4	3	3		3							4	1	1
Dicranum scoparium					3												
Diphasiastrum alpinum	4																
Empetrum nigrum	3	3	3	3	3	3				4	4		4	3	2	2	
Erica cinerea									5								
Eriophorum vaginatum															1		
Galium palustre							3										
Huperzia selago		1															
Hylocomium splendens			3		2	7	7	5	7	5	5	5	5	5	8	8	7
Hypnum jutlandicum	5	4	4	5	7					4		4		3			5
Juiperus communis																	

Phase 1 habitat type	D1.1 Dry dwarf shrub heath - acid																
NVC Community	H12 *Calluna vulgaris - Vaccinium myrtillus* heath																
Juncus squarosus				4										1			
Juniperus communis													5				
Luzula pilosa												2					
Nardus stricta							4										
Oxalis acetosella							3										
Plagiothecium undulatum									3	2	2	2					
Pleurozium schreberi			7	8	6	7	4	5	5	5	4	4	5	4		4	5
Polytrichum commune								3									
Polytrichum juniperinum		3															
Potentilla erecta							3				3		3	3		2	
Rhytidiadelphus loreus										3	3	4	3	4			
Rhytidiadelphus squarrosus														3			
Rhytidiadelphus triquetrus							3	5	3				5	4			
Scleropodium purum										3	4	4					
Sorbus aucuparia (sapling)																	
Sphagnum fallax																	
Stellaria sp.							3										
Vaccinium myrtillus			1			4	4	3	4	5	4	5	5	6		4	3
Vaccinium vitis-idaea						4	5	4	3	4	5	4	4	4	2	4	2
Viola canina							3										

Table 8.19

Phase 1 habitat type	D1.1 Dry dwarf shrub heath - acid												
NVC Community	H21 *Calluna vulgaris – Vaccinium myrtillus – Sphagnum capillifolium* heath												
Surveyor	MW	MW	MW	MW	MW	HEL	HEL	HEL	HEL	HEL	HEL	HEL	HEL
Quadrat no. (raw data)	9	10	12	13	14	8	12	14	15	20	24	33	70
Grid reference	NH 75644 32708	NH 75658 32817	NH 75617 32969	NH 75608 33001	NH 75617 33062	NH 76518 32932	NH 76246 33017	NH 76743 33065	NH 76816 33078	NH 76405 33344	NH 72946 34503	NH 72966 34472	NH 74603 33935
Sub-community	H21	H21	H21	H21	H21	H21a	H21a	H21a	H21a	H21a	H21a	H21a	H12a /H21
Species	**Cover (DOMIN)**												
Anemone nemorosa									3	2	1		
Blechnum spicant	4	4			3	3			2		3	4	2
Calluna vulgaris	8	7	8	7	9	8	9	9	8	8	8	8	7
Carex binervis	2											2	
Carex nigra													2
Cladonia portentosa								2					
Deschampsia flexuosa	3	3		3	3	2					2		
Empetrum nigrum	3		3	3		2							
Equisetum sylvaticum							2						
Erica tetralix						1	1		2	2			
Eriophorum vaginatum						1		2					
Galium saxatile	2												
Hylocomium splendens	5	7	4	4	7	6	7	7	7	7	6	5	7
Hypnum jutlandicum	3												
Juiperus communis							2						4
Juncus effusus	3			3									
Juniperus communis			1						3				

Phase 1 habitat type	D1.1 Dry dwarf shrub heath - acid												
NVC Community	H21 *Calluna vulgaris – Vaccinium myrtillus – Sphagnum capillifolium* heath												
Lathyrus montanus										1			
Lysimachia nemorum									2				
Oxalis acetosella													3
Phegopteris sp.					4								
Plagiothecium undulatum	3	3											
Pleurozium schreberi		5		3	4						4	4	
Polytrichum commune	5	3	3	5									2
Polytrichum sp.						2	3	3					
Potentilla erecta	3			3	3				2			2	
Rhytidiadelphus loreus												5	
Rhytidiadelphus triquetrus		3		3					3				
Salix aurita				3					8	8			
Sorbus aucuparia (sapling)													1
Sphagnum capillifolium	6	6	6	5		8	8	8	6	7	7	7	
Sphagnum fallax	4		7	6	6								4
Succissa pratensis									2				
Thuidium tamariscinum							7						
Trientalis europaea									2				
Vaccinium myrtillus	6	7	5	5	5	4	3	2			6	7	7
Vaccinium vitis-idaea	4	5	4	4	4		4				5	5	4
Viola riviniana										2			

8.3 Annex 3 – Photographs

Target Note Photographs	
	
Photo 1. TN1 - a bog pool.	**Photo 2.** TN2 - peat hags.
	
Photo 3. TN3 - a pond with M2 bog pool community.	**Photo 4.** TN4 - a collapsed peat pipe showing deep peat.
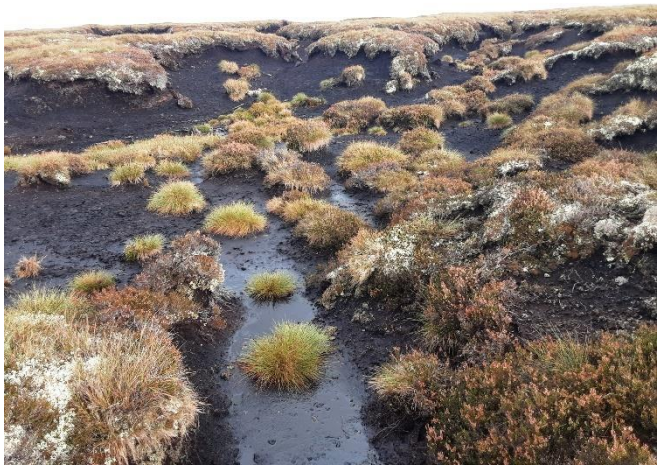	
Photo 5. TN7 - an area of extensive peat erosion.	**Photo 6.** TN8 – a mosaic of eroding M19 bog with M15 and M6 communities.

Target Note Photographs	
	
Photo 7. TN9 – sedge flush on a steep slope.	**Photo 8.** TN10 – steep gully with mixed scrub.
	
Photo 9. TN11 – juniper scrub.	**Photo 10.** TN12 – stream with M6 community along the banks.
	
Photo 11. TN28 – partially revegetated hag.	**Photo 12.** TN29 – peat hag containing acid flush.

Target Note Photographs	
	
Photo 13. TN30 – partially revegetated peat hag.	**Photo 14.** TN32 – base-rich water flow.
	
Photo 15. TN34 – peat hag system with bare peat.	**Photo 16.** TN35 – revegetating hag system.

Target Note Photographs		
		
Photo 17. TN5 – burn within gully.	**Photo 18.** TN6 – gully with heather and juniper scrub.	**Photo 19.** TN31 – bryophyte dominated spring.
		
Photo 20. TN33 **–** bog pool with extensive bog-moss.	**Photo 21.** TN36 – hag system with bare peat.	**Photo 22.** TN37 – small spring within peat hag.

8.4 Annex 4 – Scientific Names

Table 8.4. The common and scientific names of plant species included in this Appendix.

Common Name	Scientific Name
Aquatic plants	
Ivy-leaved crowfoot	*Ranunculus hederaceus*
Water starwort	*Callitriche stagnalis*
Forbs	
Bog asphodel	*Narthecium ossifragum*
Bog pimpernel	*Anagallis tenella*
Chickweed	*Stellaria sp.*
Chickweed wintergreen	*Lysimachia europaeus*
Common butterwort	*Pinguicula vulgaris*
Common dog-violet	*Viola riviniana*
Common mouse-ear	*Cerastium fontanum*
Common sorrel	*Rumex acetosa*
Creeping buttercup	*Ranunculus repens*
Marsh violet	*Viola palustris*
Heath bedstraw	*Galium saxatile*
Heath dog-violet	*Viola canina*
Lesser spearwort	*Ranunculus flammula*
Marsh bedstraw	*Galium palustre*
Marsh thistle	*Circium palustre*
Marsh willowherb	*Epilobium palustre*
Marsh violet	*Viola palustris*
Rosebay willowherb	*Chamaenerion angustifolium*
Round-leaved sundew	*Drosera rotundifolia*
Tormentil	*Potentilla erecta*
Water-blinks	*Montia fontana*
White clover	*Trifolium repens*
Wood-sorrel	*Oxalis acetosella*
Yarrow	*Achillea millefolium*
Grasses, sedges, and rushes	
Bottle sedge	*Carex rostrata*

Common Name	Scientific Name
Bulbous rush	*Juncus bulbosus*
Carnation sedge	*Carex panacea*
Common bent	*Agrostis capillaris*
Common cottongrass	*Eriophorum angustifolium*
Common sedge	*Carex nigra*
Common yellow sedge	*Carex demissa*
Deergrass	*Trichophorum germanicum*
Dioecious sedge	*Carex dioica*
Glaucous sedge	*Carex flacca*
Green-ribbed sedge	*Carex binervis*
Hare's tail cottongrass	*Eriophorum vaginatum*
Heath rush	*Juncus squarrosus*
Heath wood-rush	*Luzula multiflora*
Marsh arrowgrass	*Triglochin palustris*
Mat-grass	*Nardus stricta*
Purple moor grass	*Molinia caerulea*
Sharp-flowered rush	*Juncus acutiflorus*
Sheep's fescue	*Festuca ovina*
Soft rush	*Juncus effusus*
Star sedge	*Carex echinata*
Stiff sedge	*Carex bigelowii*
Sweet vernal-grass	*Anthoxanthum odoratum*
Tawny sedge	*Carex hostiana*
Tufted hairgrass	*Deschampsia cespitosa*
Wavy hairgrass	*Deschampsia flexuosa*
White sedge	*Carex canescens*
Yorkshire fog	*Holcus lanatus*
Mosses, ferns, and lichens	
Acute-leaved bog-moss	*Sphagnum capillifolium*
Alpine clubmoss	*Diphasiastrum alpinum*
Beech fern	*Phegopteris sp.*
Bifid crestwort	*Lophocolea bidentata*
Big shaggy-moss	*Rhytidiadelphus triquetrus*

Common Name	Scientific Name
Blunt-leaved bog-moss	*Sphagnum palustre*
Bog bead-moss	*Aulacomnium palustre*
Broom fork-moss	*Dicranum scoparium*
Common haircap	*Polytrichum commune*
Common mare's-tail	*Hippuris vulgare*
Common tamarisk-moss	*Thuidium tamariscinum*
Cow-horn bog-moss	*Sphagnum auriculatum*
Dotted thyme-moss	*Rhizomnium punctatum*
Feathery bog-moss	*Sphagnum cuspidatum*
Fir clubmoss	*Huperzia selago*
Flat-topped bog-moss	*Sphagnum fallax*
Fountain apple-moss	*Philonotis fontana*
Glittering wood-moss	*Hylocomium splendens*
Hard fern	*Blechnum spicant*
Heath plait-moss	*Hypnum jutlandicum*
Heath star-moss	*Campylopus introflexus*
Iceland moss	*Cetraria islandica*
Juniper haircap	*Polytrichum juniperinum*
Marsh forklet-moss	*Dicranella palustris*
Overleaf pellia	*Pellia epiphylla*
Papillose bog-moss	*Sphagnum papillosum*
Pointed spear-moss	*Calliergonella cuspidata*
Red bog-moss	*Sphagnum rubellum*
Red-stemmed feather-moss	*Pleurozium schreberi*
Reindeer lichen	*Cladonia arbuscula*
Reindeer lichen	*Cladonia portentosa*
Reindeer lichen	*Cladonia rangiferina*
Reindeer lichen	*Cladonia uncialis*
Rigid bog-moss	*Sphagnum teres*
Slender cow-horn bog-moss	*Sphagnum subsecundum*
Spiky bog-moss	*Sphagnum squarrosum*
Springy turf-moss	*Rhytidiadelphus squarrosus*
Water horsetail	*Equisetum fluviatile*

Common Name	Scientific Name
Waved silk-moss	*Plagiothecium undulatum*
Woolly fringe-moss	*Racomitrium lanuginosum*
Woody species	
Bearberry	*Arctostaphylos uva-ursi*
Bell heather	*Erica cinerea*
Bilberry	*Vaccinium myrtillus*
Bog myrtle	*Myrica gale*
Common heather	*Calluna vulgaris*
Cowberry	*Vaccinium vitis-idaea*
Cranberry	*Vaccinium oxycoccus*
Cross-leaved heath	*Erica tetralix*
Crowberry	*Empetrum nigrum*
Downy birch	*Betula pubescens*
Eared willow	*Salix aurita*
Juniper	*Juniperus communis*
Lodgepole pine	*Pinus contorta*
Rowan	*Sorbus acuaparia*
Scots pine	*Pinus sylvestris*
Silver birch	*Betula pendula*
Sitka spruce	*Picea sitchensis*