TECHNICAL APPENDIX 8.2

Clauchrie Windfarm

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Table of Contents

Executive Summary 3
1 Introduction 3
1.1 Background 3
1.2 The Site and Study Area 3
2 Methods 3
2.1 Data Capture and Analysis 3
2.2 Survey Limitations 3
3 Results 3
3.1 Overview 3
3.2 Standing Water 4
3.3 Mires and Flushes 4
3.4 Wet Heaths 5
3.5 Dry Heaths 5
3.6 Grasslands and Montane Communities 5
3.7 Woodland and Scrub 6
4 Evaluation 7
4.1 Reference lists 7
4.2 Evaluation 7
5 References 9
Figure TA_8.2.1: Study Area 10
Figure TA_8.2.2: NVC Communities 11
Figure TA_8.2.3: Potential Groundwater Dependency 12
Annex TA_8.2.A: Target Notes 13
Annex TA_8.2.B: Species List 16
Executive Summary

National Vegetation Classification surveys were carried out in July 2019 for a proposed wind farm development site and a wider study area. The surveys, which excluded commercial conifer plantation which dominates the Study Area, revealed the presence of a relatively restricted range of habitat types, culminating in 18 standard NVC communities and one non-standard community within the Study Area, along with a range of further sub communities. Of these, a relatively small number of communities account for most of the non-plantation Study Area.

The most common and widespread semi-natural communities within the Study Area are M23 Juncus effusus/Scutellaria salicifolia-Galium palustre rush pasture, M6 Carex echinata-Sphagnum fallax/denticulatum mire and H18 Vaccinium myrtillus-Deshampsia flexuosa heath. The remainder of the study area is made up of a relatively small number of mire, grassland, bracken, woodland and heath communities. The vegetation is often comprised of complex mosaic of two or more communities.

The vegetation communities have been heavily influenced by anthropogenic actions, with the single largest factor being the widespread commercial conifer plantation and its associated drainage, drying and shading effects. However, some large and relatively homogenous stands of vegetation occur, notably on hillsides in the north of the Study Area and along watercourses.

Many of the communities are potentially groundwater dependent, but those associated with plantation rides are likely to be relatively homogenous stands of vegetation occur, within the Study Area, notably toward the base of open hillsides.

1 Introduction

1.1 Background

1.1.1 ITPEnergised was commissioned by ScottishPower Renewables (SPR) to carry out a National Vegetation Classification (NVC) survey at the proposed Clauchrie Windfarm, located approximately 6 km northwest of Barrhill, South Ayrshire (hereafter referred to as the ‘proposed Development’).

1.1.2 The aim of the NVC survey was to identify and map the plant communities within the Site and wider study area in order to identify vegetation of nature conservation interest or areas with potential groundwater dependence.

1.1.3 This report details the findings of the NVC survey together with an evaluation of the communities described.

1.2 The Site and Study Area

1.2.1 The area within the application boundary (hereafter referred to as the “Site”) is located in Glentrool Forest, east of the operational Mark Hill Windfarm. It comprises an access corridor connecting the Site to the A714 in the south, within the Dumfries and Galloway Council Area, and a proposed turbine development area in the north within the South Ayrshire Council area. Elevations within the application boundary range from c.150m in the far south to 565m at Craignereoch in the far north of the site.

1.2.2 The Site is dominated by Sitka spruce (Picea sitchensis) plantation, with coupes of varying ages, ranging from recently felled and/or re-stocked areas to mature forestry. Open habitats occur along watercourses and on some hillslopes that represent a typical upland/upland fringe habitat assemblage for the region, although they are often heavily influenced by the wider forestry. The NVC survey focussed on mapping the habitats within the Site and a 100 m buffer (hereafter referred to as the ‘Study Area’ – see Figure TA_8.2.1). Because turbines would not be proposed on or near the Site boundary, a minimum 250m buffer was effectively observed around any potential deep excavations, e.g. for turbine foundations of borrow pits.

1.2.3 The Study Area does not overlap with any nature conservation designation for botanical or habitat-related qualifying features.

2 Methods

2.1 Data Capture and Analysis

2.1.1 The survey was carried out on 23-25 July 2019 by experienced surveyors.

2.1.2 The vegetation was mapped and classified using the standard methodology (Rodwell 1991 et seq.; Rodwell 2006). It involved mapping polygons of apparently homogenous vegetation by eye and then sampling the vegetation within polygons. This was done using both quantitative (quadrats) and qualitative sampling.

2.1.3 Sampling involved recording the species present, together with their abundances and noting other relevant information, such as any evidence of grazing, drainage or trampling. The data were subsequently compared with the standard NVC tables and classified accordingly. Stands were classified to sub-community level where possible, although in some cases the vegetation was mapped to community level only, because vegetation patches were too small, species-poor, and/or exhibited characteristics of two or more sub-communities. Polygons with numerous small-scale changes in community type or transition zones between sub-communities, e.g. in response to underlying hydrological variation, soils or disturbance, were mapped as mosaics with an approximate percentage cover of each constituent NVC community or sub-community.

2.1.4 Botanical nomenclature in this report follows that of Stace (2010) for vascular plants and Atherton et al. (2010) for bryophytes.

2.2 Survey Limitations

2.2.1 The NVC surveys were carried out during the optimal season for NVC surveys and in favourable conditions for survey. Some small sections of the Study Area were not accessible owing to forestry operations or because of breeding raptor presence. However, these constraints affected less than 5% of the Survey Area and are not considered to significantly affect the validity of the survey results, or the conclusions in this report.

2.2.2 It should be noted that the NVC system does not cover all the semi-natural vegetation types found in Scotland. Since publication of the NVC classification in the 1990s, additional data capture has led to the identification of additional plant communities, some of which are described in Rodwell et al. (2000) and Avers et al. (2004). Where such communities are found and recorded, they are given a non-NVC community code and are described.

3 Results

3.1 Overview

3.1.1 The survey results are displayed in Figure TA_8.2.2. The figure also shows the locations of Target Notes (TNs), which have been produced to illustrate particular stands of vegetation; TNs and any accompanying plates are provided in Annex TA_8.2.4. A list of plant species is provided in Annex TA_8.2.6, where the reader will also find the scientific names of species mentioned below.

3.1.2 With the exception of commercial conifer plantation, categories of vegetation within the study area include the following 19 plant communities:

- Standing water: A9;
- Mires and flushes: M2, M6, M17, M19, M20, M23, M25;
- Wet heaths: M15, M16;
- Dry heaths: H18;
- Grasslands and Montane Communities: U2, U5, U16, U20, MG10, non-standard NVC community Festuca rubra-Holcus lanatus-Anthoxanthum odoratum grassland; and
3.1.4 Areas of conifer plantation do not align with NVC communities. They have been described in broad Phase 1 habitat survey terms in ITPEnergised (2019).

3.1.5 The following sections describe the flora, structure and habitat of these communities within the Study Area. The NVC communities within each broad habitat type (e.g. woodland) are described in order of community number within the study area.

3.2 Standing Water

A9 Potamogeton natans community

3.2.1 Sub-communities recorded: No clear alignment with described sub-communities.

3.2.2 Waterbodies with A9 vegetation are uncommon in the Study Area but were recorded in three places within the potential turbine area, including Loch Scalloch and ponds within disused quarries (see TN2). The vegetation is poor and limited to broad-leaved pondweed (Potamogeton natans) and water horsetail (Equisetum fluviatile), with most of the water surface having no vegetation.

3.2.3 This community is common in a range of waterbodies in the uplands, with broad-leaved pondweed being tolerant of a range of trophic states (Rodwell 1995, Averis et al. 2004).

3.3 Mires and Flushes

M2 Sphagnum cuspidatum/fallax bog pool community

3.3.1 Sub-communities recorded: The M2b Sphagnum fallax sub-community.

3.3.2 A single area of M2 was recorded underneath an overhead power line in the north-western part of the Site, where pools occur in mosaic with other vegetation (see TN5). They may have formed in old vehicle ruts. The pools were dominated and often completely infilled by flat-topped bog-moss (Sphagnum fallax), but feathery bog-moss (Sphagnum cuspidatum) was locally co-dominant. The surrounding vegetation, which was mainly characterised by dominant sharp-flowered rush (Juncus acutiflorus), sometimes with abundant papillose bog-moss (Sphagnum papillosum), keys out as M6 mire and M23 rush-pasture (see below).

3.3.3 This community is typically found in pools and lawns on the surface of very wet and base-poor peats on ombrogenous and topogenous mires in the less oceanic parts of Britain (Rodwell et al. 1991, Averis et al. 2004). This community has been reduced by widespread drainage and cutting of mires, so that often just small and limited to broad-leaved pondweed (Potamogeton natans) and water horsetail (Equisetum fluviatile), with most of the water surface having no vegetation.

3.3.4 This is likely to be the origin within the Site, where is occurs within a forestry ride.

M6 Carex echinata–Sphagnum recurvum1/denticulatum mire

3.3.4 Sub-communities recorded: The M6c Juncus effusus sub-community and the M6d Juncus acutiflorus subcommunity.

3.3.5 M6 mire is widespread and common throughout the Study Area, especially within rides fed by drainage water from forest coupes. However, it also occurs as larger, more natural stands on hillsides in the north of the Site and along watercourses (e.g. TN7-14). It is consistently represented by the two rush-dominated sub-communities, characterised by soft-rush (Juncus effusus) (see TN1 for an example) or sharp-flowered rush, or sometimes both, over a dense layer of flat-topped bog-moss and locally abundant purple moor-grass (Molinia caerulea) and common haircap (Polytrichum commune). Associates are infrequent and present at low abundance but included Yorkshire fog (Holcus lanatus), tufted hairgrass (Deschampsia cespitosa), wavy hairgrass (Deschampsia flexuosa), bent grasses (Agrostis spp.), common sedge (Carex nigra), tormentil (Potentilla erecta), common sorrel (Rumex acetosa), common marsh bedstraw (Galium palustre) and heath bedstraw (Galium saxatile), as well as the bryophytes blunt-leaved bog-moss (Sphagnum palustre), acute-leaved/red bog-moss (Sphagnum capillifolium), springy turf-moss (Rhytiadellopsis squarrosus), and heath plait-moss (Hytnum侏儒).
suggest local transition to other vegetation, notably M19 blanket mire, although, as noted by Averis et al. (2004), it is quite common to find bogs dominated by hare’s-tail cottongrass that do not correspond well to either of the two described M20 sub-communities.

3.3.15 M20 blanket mire occurs from about 300 m up to over 900 m in Scotland. It is characteristic of ombrogenous peats where past influences from grazing, burning, drainage and/or pollution have reduced the diversity of the vegetation and in some places led to gross erosion and drying of the peat (Rodwell et al. 1991). As such, it is probably derived from M19 Calluna-Eriophorum mire (Averis et al. 2004).

M23 Juncus effusus/acetiflorus–Galium palustre rush-pasture

3.3.16 Sub-communities recorded: The M23a Juncus acetiflorus sub-community and the M23b Juncus effusus sub-community.

3.3.17 M23 rush-pasture is widespread at mainly lower altitudes within the Survey Area, where it notably occurs along watercourses, as well as in rides and other open areas within forestry and in former clear-fells. The rushes, notably soft rush but in some places sharp-flowered rush, typically dominate the vegetation, whereas abundant associates varied between stands but often include one or more of Yorkshire fog, purple moor-grass, tufted hair-grass, marsh thistle (Cirsium palustre) and common sorrel, as well as pointed spear-moss (Calliergonella cuspidata) and springy turf-moss. Associated species present at low abundance include purple moor-grass, bent grasses, creeping buttercup (Ranunculus repens), meadowsweet (Filipendula ulmaria), rosebay willowherb (Chamerion angustifolium), bracken (Pteridium aquilinum), Angelica (Angelica sylvestris), common marsh bedstraw, broadleaved dock (Rumex obtusifolius) and marsh ragwort (Senecio aquaticus).

3.3.18 M23 rush-pasture is a community of gently-sloping ground in and around the margins of soligenous flushes, as a zone around topogenous mires and wet heaths, and in poorly drained, comparatively unimproved or reverted pasture (Rodwell et al. 1991). It can be found on a variety of moderately acid to neutral soils that are kept moist to wet for most of the year.

M25 Molinia caerulea–Potentilla erecta mire

3.3.19 Sub-communities recorded: The M25a Erica tetralix sub-community.

3.3.20 M25 mire occurs in mainly forestry rides, often in mosaics with other communities, where it is characterised by the dominance of purple moor-grass (see TN4). Associated species are generally low in abundance, but include soft-rush, red fescue (Festuca rubra), tormentil, marsh bedstraw, flat-topped bog-moss, heath plait-moss and common haircap.

3.3.21 M25 mire is a community of moist, but usually well aerated, acid to neutral peats and peaty soils (Rodwell et al. 1991). It occurs over gently-sloping ground, marking out seepage zones and flushed margins of topogenous mires, but also extends onto the fringes of ombrogenous mires (Rodwell et al. 1991, Averis et al. 2004). The community clothes ground where there would once have been woodland or where there is the potential for woodland to develop, and many square kilometres of purple moor-grass grassland have been lost under forestry plantations (Averis et al. 2004). Frequent burning and grazing can convert wet heath and blanket bog to M25 mire, especially when these treatments are combined with artificial drainage (Averis et al. 2004).

3.4 Wet Heaths

M15 Scirpus cespitosum–Erica tetralix wet heath

3.4.1 Sub-communities recorded: The M15a Carex panicosa sub-community and the M15d Vaccinium myrtillus sub-community.

3.4.2 M15 wet heath occurs in larger rides and in open areas in mainly the northern part of the Study Area, but it does not form extensive stands. The species composition varies but most stands aligned to the M15d Vaccinium myrtillus sub-community and, as such, can be regarded as a wetter associate of the more extensive areas of blueberry-dominated dry heath within the Study Area (see H18 heath below). The main characteristic species include heather, blueberry, purple moor-grass and mosses, such as acute-leaved/red bog-moss and heath plait-moss, although most stands tend to have a low presence of species such as hare’s-tail cottongrass, wavy hair-grass, sweet vernal-grass (Anthoxanthum odoratum), tormentil, and cross-leaved heath too. Additional associates locally include heath rush, soft-rush, bog asphodel (Narthecium ossifragum), heath bedstraw, crowberry (Empetrum nigrum), red-stemmed feather-moss and blunt-leaved bog-moss.

3.4.3 M15 wet heath is a community of shallow, wet or intermittently waterlogged, acid peat or peaty mineral soils on hillsides, over moraines, and within tracts of blanket mire. It also extends on to deep peat where the original bog vegetation has been damaged or modified by burning, grazing, drainage and peat cutting (Averis et al. 2004).

M16 Erica tetralix–Sphagnum compactum wet heath

3.4.4 Sub-communities recorded: The M16d Juncus squarrosus–Dicranum scoparium sub-community.

3.4.5 M16 wet heath was recorded in only a single location within the Study Area; in an open area adjacent to plantation forestry in the west of the Study Area. It is characterised by bog myrtle (Myrica gale), purple moor-grass, sharp-flowered rush, common sorrel, compact bog-moss (Sphagnum compactum) and red-stemmed feather-moss, whereas less abundant associates include Yorkshire fog, soft-rush, cross-leaved heath, marsh willowherb and marsh bedstraw. However, the absence of heather and the presence of foxglove (Digitalis purpurea) make this a relatively poor fit with M16.

3.4.6 M16 wet heath typically occurs on shallow acid peat on sloping ground, on moist and intermittently waterlogged soils (Averis et al. 2004). It may in some cases be derived from bog through frequent or severe burning and heavy grazing and trampling.

3.5 Dry Heaths

H18 Vaccinium myrtillus–Deschampsia flexuosa heath

3.5.1 Sub-communities recorded: The H18a Hylocomium splendens–Rhytidiadelphus loreus sub-community and the H18b Alchemilla alpina–Carex pilulifera sub-community.

3.5.2 H18 heath is common the north of the Study Area, where it dominates large areas on Fell Hill, Cairn Hill and PINBreck Hill (see TN6). It is normally dominated by blueberry and with a high abundance of wavy hair-grass. Other species present at high abundance included one or more of sweet vernal-grass, velvet bent (Aegopodium podagraria), heath plait-moss, glittering wood-moss and springy turf-moss. Large patches of greater woodrush (Luzula sylvatica) are often present (see U16 below). Species present at low abundance include some or more of red fescue, stiff sedge, heath bedstraw, tormentil, common sorrel, harebell (Campanula rotundifolia), fir clubmoss (Huperzia selago) and rusty swan-neck moss (Campylypus flexuosus). The local presence of species atypical of H18 heath would suggest transition to other communities; for example scattered individuals of heath spotted-orchid (Dactylorhiza maculata) might suggest a local transition to H21 Calluna vulgaris–Vaccinium myrtillus–Sphagnum capillifolium heath, and elsewhere occasional bog asphodel, ribwort plantain (Plantago lanceolata), marsh thistle or wild thyme (Thymus polytrichus) could similarly suggest transitions to other communities.

3.5.3 H18 is consistently associated with well-drained, acid to neutral mineral soils, hemic rankers and dry peats, and the community has a wide altitudinal range (Averis et al. 2004).

3.6 Grasslands and Montane Communities

U2 Deschampsia flexuosa grassland

3.6.1 Sub-communities recorded: The U2b Vaccinium myrtillus sub-community.

3.6.2 U2 grassland occurs in clear-felled areas of plantation along the access track in the south central part of the Study Area, and the vegetation is also locally present in recent clear-fells (e.g. TN3). The vegetation is dominated by wavy hair-grass and abundant or locally abundant Yorkshire fog, purple moor-grass, sharp-flowered rush, heath bedstraw, heather and blueberry, as well as springy turf-moss. Associated species present at lower abundance
include soft-rush, tufted hair-grass, common sorrel, common marsh bedstraw, marsh thistle, tormentil, bracken, and mosses including common haircap, little shaggy-moss, waved silk-moss (*Plagiothecium undulatum*) and bristly haircap (*Polytrichum piliferum*). The occasional presence of soft-rush, marsh violet (*Viola palustris*), foxglove and bramble (*Rubus fruticosus*) would suggest a local transition to other vegetation, and some stands also contained regenerating trees, notably Sitka spruce (*Picea sitchensis*) and silver birch (*Betula pendula*).

3.6.3 U2 grassland is characteristic of base poor, moist but free-draining soils (Averis *et al.* 2004). It occurs through the upland fringes, often in close association with some heaths and mires and can grade into them. In many places the community represents the first stage of recolonising vegetation within felled conifer plantations where it forms an untidy grassland among the dead stumps and branches of the felled trees (Averis *et al.* 2004).

**US Nardus stricta–Gallium saxatile grassland**

3.6.4 Sub-communities recorded: The USa species-poor sub-community, the USb *Agrostis canina–Polytrichum commune* sub-community and the USd *Gallum vulgatum–Dantonia decumbens* sub-community.

3.6.5 U5 grassland is present in rides in the north-western part of the Study Area, where it occurs in mosaic with other vegetation, such as M6 and M25 mire. It is dominated by mat-grass (*Nardus stricta*), with common associates including sheep’s fleece, sweet vernal-grass, bent grasses, wavy hair-grass, tormentil and heath bedstraw, as well as mosses such as glittering wood-moss, red-stemmed feather-moss, heath plait-moss and springy turf-moss.

3.6.6 U5 grassland occurs in a range of settings, from alluvial soils, damp mineral soils which have peaty upper horizons, as well as deep peats from which the original mire vegetation has been lost, e.g. through burning, heavy grazing or drainage. As such, most stands are anthropogenic (Averis *et al.* 2004).

**U16 Luzula sylvestra–Vaccinium myrtillus tall-herb community**

3.6.7 Sub-communities recorded: The U16b *Anthoxanthum odoratum–Festuca ovina* sub-community and the U16c species-poor sub-community.

3.6.8 U16 occurs in the north of the Study Area, notably within H18 heath, where it locally forms large patches (see TN19). The vegetation is dominated by greater woodrush, which in places was the only vascular species; however, the vegetation typically also includes blueberry and mosses such as heath plait-moss, springy turf-moss and red-stemmed feathermoss.

3.6.9 U16 is most common in the uplands, between 400 m and 600 m, where it probably represents a near-natural form of vegetation and it usually occurs on shaded slopes facing between north and east and which can be mildly flushed (Averis *et al.* 2004). The succulent shoots of greater woodrush are favoured by grazing animals and the community therefore occurs in places where grazing is light or absent.

**U20 Pteridium aquilinum–Gallium saxatile community**

3.6.10 Sub-communities recorded: The U20b *Vaccinium myrtillus–Dianthus scapularis* sub-community.

3.6.11 U20 vegetation dominated by bracken was recorded adjacent to the access track in the southern part of the Study Area. In some areas the bracken is dense and features few associates; however, elsewhere associates present at low abundance include Yorkshire fog, wavy hair-grass, common bent (*Agrostis capillaris*), wood sage (*Teucrium scorodonia*), heath bedstraw, tormentil and/or heather. Mosses include red-stemmed feathermoss and common haircap. It grades into scrub and tall herb vegetation, with rosebay willowherb, foxglove, ribwort plantain, bramble, common broom (*Cytisus scoparius*) and regenerating Sitka spruce and sycamore (*Acer pseudoplatanus*).

3.6.12 U2 is typical of the zone where the farmed lowlands adjoin the unenclosed uplands. It is most common on lower hill slopes and on marginal ground, including abandoned fields, where it forms mosaics with heaths, grasslands and woodlands. The community covers fairly deep, well-drained but moist, base-poor and infertile soils (Averis *et al.* 2004).

**MG10 Holcus lanatus–Juncus effusus rush-pasture**

3.6.13 Sub-communities recorded: The MG10a typical sub-community, and the MG10b *Juncus inflexus* sub-community.

3.6.14 MG10 rush-pasture is widespread across the Study Area, although the largest stands are located in the north (e.g. TN15-16). The vegetation is characterised by locally abundant or dominant soft-rush, hard rush (*Juncus inflexus*), Yorkshire fog, creeping bent (*Agrostis stolonifera*), marsh thistle and creeping buttercup, together with mosses such as springy turf-moss. Species present at low abundance include red fescue, sweet vernal-grass, tormentil, common sorrel, white clover (*Trifolium repens*) and bog stitchwort (*Stellaaria alba*). The vegetation locally transitions into other community types, with blueberry and tufted hair-grass being locally frequent.

3.6.15 MG10 is a form of rush-pasture characteristic of damp acid to neutral soils on level to gently sloping ground (Averis *et al.* 2004). Although found on various soil types including brown earth and calcareous earth throughout its range, the community can also have close associations with various types of mire vegetation and can form significant parts of rush-dominated mire mosaics in areas of suitably moist soils.

**Non-standard NVC Community Festuca rubra-Holcus lanatus-Antoxanthum odoratum grassland**

3.6.16 Sub-communities recorded: N/a.

3.6.17 A single stand of *Festuca rubra–Holcus lanatus–Antoxanthum odoratum* grassland was recorded in the north of the Study Area. This vegetation is not described in the NVC but is mentioned in Rodwell *et al.* (2000). It is characterised by common bent, sweet vernal-grass, red fescue and Yorkshire fog, false oat-grass (*Arrhenatherum elatius*), ribwort plantain, white clover, springy turf-moss and red-stemmed feathermoss, although atypical species such as tufted hair-grass, soft-rush, marsh thistle and meadowsweet occur at low abundance and might suggest affinity with M23 rush-pasture.

3.6.18 The NVC described grassland dominated by red fescue and Yorkshire fog and with a distinctive maritime element, but subsequent surveys, including in Scotland, have recognised that similar, often species-poor and rank swarms without a maritime contingent are widely distributed (Rodwell *et al.* 2000).

3.6.19 The vegetation has little intrinsic floristic value and is therefore not a conservation priority. It is not a wetland community and is therefore not potentially groundwater dependent.

3.7 **Woodland and Scrub**

**W2 Salix cinerea-Betula pubescens–Phragmites australis woodland**

3.7.1 Sub-communities recorded: The W2a *Alnus glutinosa–Filipendula ulmaria* sub-community.

3.7.2 W2 woodland was recorded in a single location at the central part of the Study Area, where it occurs in mosaic with the U20 bracken community. It is characterised by grey willow (*Salix cinerea*), silver birch, downy birch (*Betula pubescens*), alder (*Alnus glutinosa*) and common reed (*Phragmites australis*). Associated species include tufted hair-grass, Yorkshire fog, rosebay willowherb and bog myrtle.

3.7.3 W2 woodland develops on fen peat and terraces of river valley mires and notably occurs in East Anglia and north-west England, whereas it is considered scarce in Scotland (Averis and Rodwell 2006). As such the vegetation within the Study Area might be in flux following forestry operations and it may ultimately develop into a community more typical of South-west Scotland.

**W4 Betula pubescens–Molinia caerulea woodland**

3.7.4 Sub-communities recorded: The W4b *Juncus effusus* sub-community.

3.7.5 W4 woodland was recorded in a single location in the far south of the Study Area. It is dominated by grey willow, with frequent silver birch, downy birch and goat willow (*Salix caprea*). Soft-rush is common in the ground layer, whereas heather, Yorkshire fog and common haircap occur at low abundance.
3.7.6 W4 is a community of moist to wet acidic peaty soils, on raised and valley bogs that are progressing to woodland and in base-poor flushes throughout the lowlands and uplands. One or more of purple moor-grass, bog-mosses or common haircap are ordinarily common (Avers and Rodwell 2006); although the latter was present, it was only at low abundance, and the vegetation within the Study Area might therefore be in flux following forestry operations.

4 Evaluation

4.1 Reference lists

4.1.1 In the following section the NVC communities recorded in the Study Area are compared to a number of published lists to assess their potential nature conservation interest or groundwater dependency. The following lists of international, national or council area importance have been used:

- Potential nature conservation interest:
  - Annex I habitats on Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the ‘Habitats Directive’) as summarised for the UK on the Joint Nature Conservation Committee (JNCC) website (JNCC, no date);
  - Priority habitats on the Scottish Biodiversity List (SBL) (Scottish Government 2013). The SBL was published in 2005 to satisfy the requirement under Section 2(4) of The Nature Conservation (Scotland) Act 2004, and it effectively supersedes the former UK Biodiversity Action Plan (BAP); however, habitat descriptions in the UK BAP, as provided in Maddock (2011), remain valid.
  - Priority habitats on the Ayrshire Local BAP (Ayrshire Biodiversity Action Plan Partnership 2008) – for habitats north of council area boundary in the access track corridor c. 6km north of the A714; and
  - Priority habitats on the Dumfries and Galloway Local BAP (Dumfries and Galloway Local Biodiversity Partnership) – for habitats in the access track corridor between the A714 and c.6km to the north of this.

- Potential groundwater dependency:
  - Potentially groundwater dependent terrestrial ecosystems (GWDTEs) as defined by the Scottish Environment Protection Agency (SEPA) (SEPA 2017).

4.2 Evaluation

4.2.1 The Study Area has a significant presence of commercial forestry and most of the NVC communities recorded in the study are likely to be influenced by forestry operations as well as forest hydrology (both in terms of drains channelling flows and in terms of drying impacts from the trees) as well as shade. Exemptions to this included the larger lochan, Loch Scalloch, wide watercourse corridors and larger areas of open hillside in the north of the Study Area. These areas are therefore likely to represent the least disturbed examples of semi-natural vegetation in the Study Area. Notable amongst these is H18 dry heath and M15 wet heath in the north of the Study Area.

4.2.2 Elsewhere, such as in forestry rides and in recent clear-fells, communities are typical of recent or historical disturbance, including forestry drainage and shade, and fragmentation. The vegetation is often comprised of tall-rush dominated vegetation, representing the M23 and M6 communities, depending on whether bog-mosses are absent or present. These communities are often species poor and of limited nature conservation interest.

4.2.3 Potential groundwater dependency is shown on Figure TA_8.2.3. Forestry drainage typically results in wet rides, which therefore support communities of potentially high or moderate groundwater dependence. Again, these commonly include M6 and M23, but they are likely to be predominantly surface water fed, as they are associated with forestry drains. However, more natural examples also occur, notably at the base of the hill slopes in the north of the Study Area, although with bedrock across the Site comprising a low productivity aquifer, and superficial geology across much of the Site likely to inhibit groundwater flow, there is limited potential for substantial groundwater to be present near the surface. Rather they may be areas where surface runoff from the hills naturally shed and gather.

4.2.4 Table TA_8.2.1, overleaf, summarises the nature conservation interest and/or potential groundwater dependency of each NVC category recorded.
<table>
<thead>
<tr>
<th>NVC Community</th>
<th>Annex I Habitat</th>
<th>SBL Priority Habitat</th>
<th>Ayrshire Local BAP</th>
<th>Dumfries and Galloway Local BAP</th>
<th>Potential GWDTI Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>A9 Potamogeton natans community</em></td>
<td>Not listed</td>
<td>Ponds are priority habitats Oligotrophic and dystrophic lakes are listed only as habitats on which negative impacts should be avoided</td>
<td>Not listed</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Not listed</td>
</tr>
<tr>
<td>M2 Sphagnum cuspidatum/fallow bog pool community</td>
<td>M2 is included in the priority habitat description for 7130 Blanket bogs</td>
<td>M2 is included in the priority habitat description for blanket mire (Maddock 2011)</td>
<td>Blanket bog, including bog pools, is a priority habitat but listed as not requiring active conservation management</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Not listed</td>
</tr>
<tr>
<td>M6 Carex echinata–Sphagnum recurvum/denticulatum mire</td>
<td>Not listed</td>
<td>Upland flushes, fens and swamps are listed with a watching brief only</td>
<td>Not listed but are mentioned as part of the priority description for blanket bog</td>
<td>Upland springs and flushes</td>
<td>Potentially highly groundwater dependent</td>
</tr>
<tr>
<td>M17 Scirpus cespitosus–Eriophorum vaginatum blanket mire</td>
<td>7130 Blanket bogs</td>
<td>Blanket mire</td>
<td>Blanket bog</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Not listed</td>
</tr>
<tr>
<td>M19 Calluna vulgaris–Eriophorum vaginatum blanket mire</td>
<td>7130 Blanket bogs</td>
<td>Blanket mire</td>
<td>Blanket bog</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Not listed</td>
</tr>
<tr>
<td><em>M20 Eriophorum vaginatum blanket mire</em></td>
<td>7130 Blanket bogs</td>
<td>Blanket mire is a priority habitat, but M20 mires are generally less valuable for nature conservation than the stands of less modified and impoverished blanket bog from which they have been derived (Averis et al. 2004)</td>
<td>Blanket bog is a priority habitat, but M20 mires are generally less valuable for nature conservation than the stands of less modified and impoverished blanket bog from which they have been derived (Averis et al. 2004)</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Not listed</td>
</tr>
<tr>
<td>M23 Juncus effusus/acetifolius–Galium palustre rush-pasture</td>
<td>Not listed</td>
<td>M23a is described in the list for upland flushes, fens and swamps (Maddock 2011), which are listed with a watching brief only</td>
<td>Purple moor-grass and rush-pastures are priority habitats, although it is the richer M23a vegetation, which is described</td>
<td>Purple moor-grass and rush-pastures are priority habitats, although it is the richer M23a vegetation, which is described</td>
<td>Potentially highly groundwater dependent</td>
</tr>
<tr>
<td>M25 Molinia caerulea–Potentilla erecta mire</td>
<td>7130 Blanket bogs (on peat deeper than 0.5 m)</td>
<td>M25 is included in the priority habitat description for blanket mire (Maddock 2011)</td>
<td>Blanket bog is a priority habitat but the priority habitat description focuses on species-rich vegetation</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Potentially moderately groundwater dependent</td>
</tr>
<tr>
<td>M15 Scirpus cespitosus–Erica tetralix wet meadow</td>
<td>4010 Northern Atlantic wet meadows with Erica tetralix</td>
<td>M15 is included in the priority habitat description for both blanket mire and upland heathland (Maddock 2011)</td>
<td>Upland heath</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Potentially moderately groundwater dependent</td>
</tr>
<tr>
<td>M16 Erica tetralix–Sphagnum compactum wet heath</td>
<td>4010 Northern Atlantic wet meadows with Erica tetralix</td>
<td>Upland heathland</td>
<td>Upland heath</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Potentially moderately groundwater dependent</td>
</tr>
<tr>
<td>H18 Vaccinium myrtillus–Deschampsia flexuosa heath</td>
<td>4030 European dry heaths</td>
<td>Upland heathland</td>
<td>Upland heath</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Not listed</td>
</tr>
<tr>
<td>U2 Deschampsia flexuosa grassland</td>
<td>Not listed</td>
<td>Listed in the priority habitat description for lowland (to 300 m) dry acid grassland (Maddock 2011)</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Acid grassland (both lowland and upland types)</td>
<td>Not listed</td>
</tr>
<tr>
<td>U5 Nardus stricta–Galium saxatile grassland</td>
<td>Not listed</td>
<td>Nardus stricta–Galium saxatile grassland listed with a watching brief only</td>
<td>Lowland dry acid grassland</td>
<td>Acid grassland (both lowland and upland types)</td>
<td>Not listed</td>
</tr>
<tr>
<td>U16 Luzula sylvatica–Vaccinium myrtillus call-herb community</td>
<td>Not listed</td>
<td>U16 is not a conservation priority in its own right but can support species of conservation interest, notably in inaccessible locations such as inland rock outcrop and scree habitats, which is listed as a habitat on which negative impacts should be avoided. However, this specific category is absent from the Study Area</td>
<td>Not listed</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Potentially highly groundwater dependent</td>
</tr>
<tr>
<td>U120 Pteridium aquilinum–Galium saxatile community</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>MG10 Holcus lanatus–Juncus effusus rush pasture</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Potentially moderately groundwater dependent</td>
</tr>
<tr>
<td>Non-standard NVC Community Festuca rubra–Holcus lanatus–Anthoxanthum odoratum grassland</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Not listed</td>
</tr>
<tr>
<td>W2 Salix cinerea–Betula pubescens–Phragmites australis wetland</td>
<td>W2a is listed in the description for 9160 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)</td>
<td>Wet woodland</td>
<td>Wet woodland</td>
<td>Not listed</td>
<td>Potentially moderately groundwater dependent</td>
</tr>
<tr>
<td>W4 Betula pubescens–Molinia caerulea woodland</td>
<td>Not listed</td>
<td>Upland birchwoods</td>
<td>* Not relevant – the community was not recorded within the council area</td>
<td>Native birchwoods</td>
<td>Potentially highly groundwater dependent</td>
</tr>
</tbody>
</table>
References


ITPEnegised (2019). Technical Appendix 7.1: Clauchrie Wind Farm Extended Phase 1 Habitat Survey.


Rodwell JS, Dring JC, Averis ABG, Proctor MCF, Malloch AJC, Schaminée JHJ and Dargie TCD (2000). Review of coverage of the National Vegetation Classification. JNCC Report, No. 302. Available at: http://archive.jncc.gov.uk/page-2312#download.


Legend
- Application Boundary
- Buffer (100m)
- Target Notes

NVC Communities
- A9 Potamogeton natans community
- M2 Sphagnum cuspidatum/tall tussock mire
- M6 Carex echinata-Sphagnum recurvum/lecanoridens mire
- M17 Scirpus cespitosus-Eriophorum vaginatum blanket mire
- M19 Calluna vulgaris-Eriophorum vaginatum blanket mire
- M20 Eriophorum vaginatum blanket mire
- M23 Juncus effusus/Salix cinerea-Galium saxatile rush-pasture
- M25 Molinia caerulea-Potentilla erecta mire
- M15 Trichophorum cespitosum-Erica tetralix wet heath
- M16 Erica tetralix-Sphagnum compactum wet heath
- M18 Vaccinium myrtillus-Deschampsia flexuosa heath
- L2 Deschampsia flexuosa grassland
- U5 Narbon stricta-Galium saxatile grassland
- U16 Luzula sylvatica-Vaccinium myrtillus tall-herb community
- L20 Pleioblastus aquilinum-Galium saxatile community
- M510 Holcus lanatus-Juncus effusus rush-pasture

Non-standard NVC Communities
- Festuca rubra-Holcus lanatus-Anthoxanthum odoratum grassland
- W2 Salix cinerea-Betula pubescens-Phragmites australis woodland
- W4 Betula pubescens-Molinia caerulea woodland

Clauchrie Windfarm
EIA Report
National Vegetation Classification (NVC)
Clauchrie Windfarm
EIA Report
National Vegetation Classification (NVC)

Legend
- Application Boundary
- Buffer (100m)
- Target Notes

NVC Communities
- M1 Potamogeton natans community
- M2 Sphagnum cuspidatum-falax bug pool community
- M6 Carex echinata-Sphagnum recurvatum/Liophyllum nitidum fen community
- M17 Scirpus cespitosus-Eriophorum vaginatum blanket mire
- M19 Calluna vulgaris-Eriophorum vaginatum blanket mire
- M23 Juncus effusus-Salix acutifolius–Galium calcarate rush-pasture
- M25 Molinia caerulea-Potentilla erecta mire
- M15 Trichophorum cespitosum-Erica tetralix wet heath
- M16 Erica tetralix–Sphagnum compactum wet heath
- M18 Vaccinium myrtillus–Deschampsia flexuosa heath
- U2 Deschampsia flexuosa grassland
- U5 Narbus stricta–Galium saxatile grassland
- U16 Luzula sylvatica–Vaccinium myrtillus tall-herb community
- U20 Pteridium aquilinum–Galium saxatile community
- M10 Holcus lanatus–Juncus effusus rush-pasture

Non-standard NVC Communities
- Festuca rubra–Holcus lanatus–Anthoxanthum odoratum grassland
- W2 Salix cinerea–Betula pubescens–Phragmites australis woodland
- W4 Betula pubescens–Molinia caerulea woodland

Figure A. Rev Date By Comment
1:11,200 Scale @ A1

Clauchrie Windfarm
EIA Report
National Vegetation Classification (NVC)

Org No
EDI_1263_EIAR

Rev Date By Comment
A 04/11/19 AG First issue.

Datum: OSGB36
Projection: TM

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NVC Communities
M2 Potamogeton natans community
M2 Sphagnum cuspidatum/tutta bog pool community
M6 Carex echinata–Sphagnum recurvatum/leucolithic mire
M17 Scirpus cespitosus–Ericophorum vaginatum blanket mire
M19 Calluna vagans–Ericophorum vaginatum blanket mire
M20 Ericophorum vaginatum blanket mire
M23 Juncus effusus/valutiflorus–Galium palustre rush-pasture
M25 Molinia caerulea–Potentilla erecta mire
M15 Trichophorum cespitosum–Erica tetralix wet heath
M16 Erica tetralix–Sphagnum compactum wet heath
M18 Vaccinium myrtillus–Deschampsia flexuosa heath
U2 Deschampsia flexuosa grassland
U5 Nardus stricta–Galium saxatile grassland
U16 Luzula sylvatica–Vaccinium myrtillus tall-herb community
U20 Phleum pratense–Galium saxatile community
M30 Holcus lanatus–Juncus effusus rush-pasture

Non-standard NVC Communities
Festuca rubra–Holcus lanatus–Anthoxanthum odorum grassland
W2 Salix cinerea–Betula pubescens–Phragmites australis woodland
W4 Betula pubescens–Molina caerulea woodland

Clauchrie Windfarm
EIA Report
National Vegetation Classification (NVC)
**Legend**
- Application Boundary
- Buffer (100m)
- Target Notes

**NVC Communities**
- M2 Potamogeton natans community
- M2 Sphagnum cuspidatum/fallax bog pool community
- M6 Carex echinata-Sphagnum recurvatum/mire
- M17 Scirpus cespitosus-Eriophorum vaginatum blanket mire
- M19 Calluna vulgaris-Eriophorum vaginatum blanket mire
- M23 Eriophorum vaginatum blanket mire
- M25 Molinia caerulea-Potentilla erecta mire
- M15 Trichophorum cespitosum-Erica tetralix wet heath
- M16 Erica tetralix-Sphagnum compactum wet heath
- M18 Vaccinium myrtillus-Deschampsia flexuosa heath
- U2 Deschampsia flexuosa grassland
- U5 Nardus stricta-Galium saxatile grassland
- U16 Luzula sylvatica-Vaccinium myrtillus tall-herb community
- U20 Filipendula ulmaria-Galium saxatile community
- M10 Holcus lanatus-Juncus effusus rush-pasture

**Non-standard NVC Communities**
- Festuca rubra–Holcus lanatus–Anthoxantum odoratum grassland
- W2 Salix cinerea–Betula pubescens–Phragmites australis woodland
- W4 Betula pubescens–Molina caerulea woodland

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Clauchrie Windfarm
EIA Report
National Vegetation Classification (NVC)
**Legend**

- Application Boundary
- Buffer (100m)
- Target Notes

**NVC Communities**

- A9 Potamogeton natans community
- M2 Sphagnum cuspidatum/fallax bog pool community
- M6 Carex echinata-Sphagnum recurvum/identical mire
- M17 Scirpus cespitosus-Eriophorum vaginatum blanket mire
- M19 Calluna vulgaris-Eriophorum vaginatum blanket mire
- M20 Eriophorum vaginatum blanket mire
- M23 Juncus effusus/Saxifraga-Galium palustre rush-pasture
- M25 Molinia caerulea-Potentilla erecta mire
- M15 Trichophorum cespitosum-Erica tetralix wet health
- M16 Erica tetralix-Sphagnum compactum wet health
- M18 Vaccinium myrtillus-Deschampsia flexuosa heath
- U2 Deschampsia flexuosa grassland
- U5 Nardus stricta-Galium saxatile grassland
- U16 Luzula sylvatica-Vaccinium myrtillus tall-herb community
- U20 Phleum pratense-Galium saxatile community
- M901 Holcus lanatus-Juncus effusus rush-pasture

**Non-standard NVC Communities**

- Festuca rubra-Holcus lanatus-Anthoxanthum odoratum grassland
- W2 Salix cinerea-Butulus pubescens-Phragmites australis woodland
- W4 Betula pubescens-Molinia caerulea woodland

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**Clauchrie Windfarm**

**EIA Report**

**National Vegetation Classification (NVC)**

**Org No**: EDI_1263_EIAR

**Rev**: A  
**Date**: 07/11/19  
**DOBGB36 Projection**: TM
Legend

- Application Boundary
- Buffer (100m)
- Target Notes

NVC Communities
- M2 Potamogeton natans community
- M2 Sphagnum cuspidatum/talax bog pool community
- M6 Carex echinata-Sphagnum recurvum/denticulatum mire
- M17 Scirpus cespitosus-Eriophorum vaginatum blanket mire
- M19 Calluna vulgaris-Eriophorum vaginatum blanket mire
- M20 Eriophorum vaginatum blanket mire
- M23 Juncus effusus/aquillifolius-Galium palustre rush-pasture
- M25 Molinia caerulea-Terentilla erecta mire
- M15 Trichophorum cespitosum-Erica tetralix wet heath
- M16 Erica tetralix-Sphagnum compactum wet heath
- M18 Vaccinium myrtillus-Deschampsia flexuosa heath
- U2 Deschampsia flexuosa grassland
- U5 Nardus stricta-Galium saxatile grassland
- U16 Luzula sylvatica-Vaccinium myrtillus tall-herb community
- U20 Ptilidium aquarium-Galium saxatile community
- M21 Holcus lanatus-Juncus effusus rush-pasture

Non-standard NVC Communities
- Festuca rubra-Holcus lanatus-Antoxanthum odorum grassland
- W2 Salix cinerea-Betula pubescens-Pithegimis australis woodland
- W4 Betula pubescens-Molinia caerulea woodland

Clauchrie Windfarm
EIA Report
National Vegetation Classification (NVC)
Clauchrie Windfarm
EIA Report
Potential Groundwater Dependent Terrestrial Ecosystems (GWDTEs)

Legend
- Application Boundary
- Buffer (100m)

Ground Water Dependant Terrestrial Ecosystems (GWDTE)
Potential
- High
- Moderate

Figure
TA_8.2.3

Datum:
OSGB36

Projection:
TM

EDI_1263_EIAR

Rev A
Datum: OSGB36
07/11/19
Figures
TM
**Annex TA_8.2.A: Target Notes**

<table>
<thead>
<tr>
<th>Target Note</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mi Carex echinata–Sphagnum recurvum/denticulatum mire along a drain in a forestry ride. The vegetation is dominated by soft-rush and flat-topped bog-moss</td>
</tr>
<tr>
<td>2</td>
<td>View to waterbody in a disused borrow pit. The vegetation comprises the A9 Potamogeton natans community comprising pondweed and water horsetail</td>
</tr>
<tr>
<td>3</td>
<td>View to clearfell characterised by brash, soft-rush, Yorkshire fog and wavy hair-grass</td>
</tr>
<tr>
<td>4</td>
<td>Purple moor-grass dominated grassland on drained peat. Drains are spaced 15 m apart</td>
</tr>
<tr>
<td>Target Note</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>5</td>
<td>M2 Sphagnum cuspidatum/fallax bog pool community by a pylon in the north of the Study Area. Possibly colonisation of vehicle ruts</td>
</tr>
<tr>
<td>6</td>
<td>M18 Vaccinium myrtillus–Deschampsia flexuosa heath in the north of the Study Area. Scattered Sitka spruce occur</td>
</tr>
<tr>
<td>7</td>
<td>Area of M6c mire at the foot of an open hill. Although flanked by two small watercourses, the vegetation is likely to be fed in parts by groundwater from the hillslope.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target Note</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Area of M6c mire at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
<tr>
<td>Target Note</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>9</td>
<td>Area of M6c mire at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
<tr>
<td>10</td>
<td>Area of M6c mire at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
<tr>
<td>11</td>
<td>Area of M6c mire at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
<tr>
<td>12</td>
<td>Area of M6c mire at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
<tr>
<td>13</td>
<td>Area of Mid/U16c mosaic at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
<tr>
<td>14</td>
<td>Area of MG10a/Mid/U16c mosaic at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
<tr>
<td>15</td>
<td>Area of MG10a rush pasture at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
<tr>
<td>16</td>
<td>Area of MG10a rush pasture at the foot of an open hill. Likely to be fed by groundwater from the hillslope.</td>
</tr>
</tbody>
</table>

**Target Note**

**Description**

- View to haggling north of Study Area. This situation is very different from areas within the Study Area
- View of hillside between trees. U16 Luzula sylvatica–Vaccinium myrtillus tall-herb community is common
<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute-leaved/red bog-moss</td>
<td>Sphagnum capillifolium</td>
</tr>
<tr>
<td>Angelica</td>
<td>Anagrica sylvestris</td>
</tr>
<tr>
<td>Bent grasses</td>
<td>Agrostis spp</td>
</tr>
<tr>
<td>Blueberry</td>
<td>Vaccinium myrtillus</td>
</tr>
<tr>
<td>Blunt-leaved bog-moss</td>
<td>Sphagnum palustre</td>
</tr>
<tr>
<td>Bog asphodel</td>
<td>Sphagnum ospifragum</td>
</tr>
<tr>
<td>Bog myrtle</td>
<td>Myrica gale</td>
</tr>
<tr>
<td>Bog stitchwort</td>
<td>Stellaria alatae</td>
</tr>
<tr>
<td>Bracken</td>
<td>Pteridium aquilinum</td>
</tr>
<tr>
<td>Bramble</td>
<td>Rubus fruticosus</td>
</tr>
<tr>
<td>Bristly haircap</td>
<td>Polytrichum piliferum</td>
</tr>
<tr>
<td>Broad-leaved dock</td>
<td>Rumex obtusifolius</td>
</tr>
<tr>
<td>Broad-leaved pondweed</td>
<td>Potamogeton natans</td>
</tr>
<tr>
<td>Common bent</td>
<td>Agrostis capillaris</td>
</tr>
<tr>
<td>Common broom</td>
<td>Cyttisus scopolus</td>
</tr>
<tr>
<td>Common haircap</td>
<td>Polytrichium commne</td>
</tr>
<tr>
<td>Common marsh bedstraw</td>
<td>Galium palustre</td>
</tr>
<tr>
<td>Common sedge</td>
<td>Carex nigra</td>
</tr>
<tr>
<td>Common sorrel</td>
<td>Rumex acetosae</td>
</tr>
<tr>
<td>Creeping bent</td>
<td>Agrostis stolonifera</td>
</tr>
<tr>
<td>Creeping buttercup</td>
<td>Ranunculus repens</td>
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<tr>
<td>Cross-leaved heath</td>
<td>Erica tetralix</td>
</tr>
<tr>
<td>Crowberry</td>
<td>Empetrum nigrum</td>
</tr>
<tr>
<td>Deergrass</td>
<td>Festuca germanica</td>
</tr>
<tr>
<td>Downy birch</td>
<td>Betula pendula</td>
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<tr>
<td>False oat-grass</td>
<td>Arrhenatherum elatius</td>
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<tr>
<td>Feathery bog-moss</td>
<td>Sphagnum cuspidatun</td>
</tr>
<tr>
<td>Fir clalphmo</td>
<td>Huperzia schreberi</td>
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<tr>
<td>Flax-topped bog-moss</td>
<td>Sphagnum fallax</td>
</tr>
<tr>
<td>Foxglove</td>
<td>Digitalis purpurea</td>
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<tr>
<td>Glowing wood-moss</td>
<td>Hylomecum splendens</td>
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<tr>
<td>Greater woodrush</td>
<td>Luzulo syvatica</td>
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<tr>
<td>Grey willow</td>
<td>Saxa cinerea</td>
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<tr>
<td>Hard rush</td>
<td>Juncus inflexus</td>
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<tr>
<td>Heather's-tail cottongrass</td>
<td>Eriophorum vaginatum</td>
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<tr>
<td>Harebell</td>
<td>Campanula rotundifolium</td>
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<tr>
<td>Heath bedstraw</td>
<td>Galium segeteae</td>
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<tr>
<td>Heath plat-moss</td>
<td>Hypnum jutlandicum</td>
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<tr>
<td>Heath rush</td>
<td>Juncus squarrosus</td>
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<td>Heath spotted-orchid</td>
<td>Dactylyris nevadens</td>
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<td>Heather</td>
<td>Calluna vulgaris</td>
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<td>Heath-grass</td>
<td>Dianthus decumbens</td>
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<td>Little shaggy-moss</td>
<td>Rhytidiothrix lorens</td>
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<tr>
<td>Marsh ragwort</td>
<td>Senecio aquaticus</td>
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<td>Marsh thistle</td>
<td>Cirsium palustre</td>
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<td>Viola palustris</td>
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<td>Nardus stricta</td>
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<td>Red fescue</td>
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<td>Sharp-flowered rush</td>
<td>Junxus acetosus</td>
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<tr>
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<td>Festuca ovina</td>
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<td>Picea sitchens</td>
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<td>Sift rush</td>
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<td>Thymus polytrichus</td>
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<td>Teucrium scorodina</td>
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<tr>
<td>Yorkshire fog</td>
<td>Holcus lanatus</td>
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