

Technical Appendix 7.1 National Vegetation Classification and Habitats Survey Report



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Glenouther Wind Farm EIA Report

Wind Power North Four Limited

Prepared by:

SLR Consulting Limited

93 South Woodside Road, Glasgow, G20 6NT

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1.0 Introduction

This Technical Appendix relates to the Proposed Development as defined in **Chapter 4: Development Description** of the Environmental Impact Assessment (EIA) Report. The baseline conditions (drawn from desk-based sources only) and the effects of the Likely Grid Connection Route (as defined in **Chapter 4**) on Ecology is assessed in **Chapter 7: Ecology** of the EIA Report.

MacArthur Green (now SLR¹) was commissioned by Wind Power North Four Limited (the Applicant) to carry out a National Vegetation Classification (NVC) and habitats survey with notes on general habitat condition, for the proposed Glenouther Wind Farm (hereafter referred to as the 'Proposed Development').

The aim of the NVC survey is to identify and map the vegetation communities present within the Site to identify those areas of greatest ecological interest (i.e., Annex I habitats²; potential Groundwater Dependent Terrestrial Ecosystems (GWDTE); and Scottish Biodiversity List (SBL) priority habitats). This information was used to inform the wind farm design process, and the Ecological Impact Assessment (EclA) presented in **Chapter 7** of the EIA Report.

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

2.0 The Site and Survey Area

2.1 Overview

The Site is located on land at Glenouther Moor, situated south of Corsehouse Reservoir with the M77 motorway to the east. The closest town is Stewarton which is situated approximately 4.5 km to the south-west. The Site (shown as the land within the planning redline boundary – see **Figure 7.3.1** of Volume 3a of the EIA Report) occupies an area of approximately 205 hectares (ha) and is within an area of privately owned commercial coniferous forest plantation, with some areas of blanket bog and modified bog.

The northern part of the Site drains towards the Annick Water and Corsehouse Reservoir. The southern part of the Site drains towards the Swinzie Burn, a tributary of the Annick Water.

This Technical Appendix reports on the habitats recorded within the survey area, i.e., the entire area covered by NVC field surveys, covering a total of approximately 379 hectares (ha). The survey area in some cases extends beyond the Site, which reflects earlier and larger areas of interest which have been refined down during the iterative design process (see **Chapter 3: Site Selection and Design Strategy**) and to also provide sufficient survey buffers to account for the possible presence of potential GWDTE (where land access allowed). The survey area and its comparison with the Site is shown in **Figure 7.3.1**. The appropriate scale and 'study area' for the assessment of effects with regards habitat loss has been deemed to be the Site (as defined in **Chapter 7: Ecology**).

The Proposed Development and Site are fully described within **Chapter 3** and **Chapter 4: Development Description** of the EIA Report.

¹ Following acquisition, MacArthur Green became part of SLR Consulting Limited on 1 September 2025.

² As defined by the Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora – the 'Habitats Directive'.



2.2 Designated Sites

There is one statutory designated site containing habitat related, or botanical, qualifying features within 5 km of the Site, i.e. Brother and Little Lochs Site of Special Scientific Interest (SSSI) which is located 2.56 km to the north-east. The details of, and relevant qualifying features for, this designation relevant to this appendix is detailed in **Table 2-1**; see also **Figure 7.1**.

Table 2-1 Designated sites with botanical qualifying features within 5 km of the Site

Designated Site	Distance from Site & nearest new infrastructure (m)	Qualifying feature	Last assessed condition & date
Brother and Little Lochs SSSI	2.56 km from Site and 3.02 km from proposed new track	Oligotrophic loch	Favourable, maintained 20 March 2013
		Varnished hook-moss (<i>Hamatocaulis vernicosus</i>)	Favourable, maintained 12 March 2014

There are 30 Local Nature Conservation Site (LNCS) within 5 km of the Site that are designated (wholly or partially) for habitat related, or botanical, interests. One of these LNCS (i.e., Corsehouse Reservoir LNCS) also partially overlaps with the Site. The available details of these LNCS are presented in **Table 2-2**, see also **Figure 7.1**.

Table 2-2 LNCS with botanical qualifying features within 5 km of the Site

LNCS	Distance from Site	Description	Hydrological Connectivity with the Site
Corsehouse Reservoir	Overlaps with Site to the north	Primary habitat type: wetlands This site comprises a reservoir with open agricultural grassland and residential dwellings to the north and forestry along the southern boundary. Corsehouse Burn runs into the reservoir and a minor road runs adjacent to the north.	None
Cairn Hill Moss	1.27 km north	No further information available. Associated with William's and James' Hills Local Biodiversity Site (LBS).	None
William's and James's Hills	1.36 km north	Main habitats: acid grassland, blanket bog Notable habitats: blanket bog Reason for designation: large area of acid grassland with degraded blanket bog The site is a large area of degraded blanket bog between the B769 and Long Loch with some areas of agriculturally improved grassland.	None
Floak Bridge	1.37 km east	Main habitats: acid grassland, marshy grassland Reason for designation: large area of typical upland acid grasslands The site is a large upland area east of the M77 with acid and marshy grassland and typical upland vegetation.	None



LNCS	Distance from Site	Description	Hydrological Connectivity with the Site
Fenwick Moor (Greenfield Burn)	1.39 km south-east	Primary habitat type: mires and heaths This site comprises predominantly commercial woodland based on aerial imagery with upland habitats to the south.	None
Black Loch	1.55 km north-east	No further information available.	None
Shieldhill Bog	1.57 km east	Main habitats: blanket bog Notable habitats: blanket bog Notable species: round-leaved sundew (<i>Drosera rotundifolia</i>) Reason for designation: large area of blanket bog The site is largely undamaged and has a good range of associated plants and a local rarity.	None
Clonherb	1.95 km south-west	Primary habitat type: woodland and scrub The site comprises agricultural fields with conifer woodland to the south.	None
White Loch	2.25 km north	No further information available.	None
Moyne Moor	2.48 km north	Main habitats: wet heath, acid grassland, degraded bog Notable habitats: wet heath Notable species: round-leaved sundew, water sedge (<i>Carex aquatilis</i>) Reason for designation: large area of upland bog and heath The site is a large area of upland degraded bog with a small range of associated habitats. There is a range of bog plants and two local rarities.	None
Long Loch	2.52 km north	No further information available.	None
Robertland & Swinzie Burn	2.54 km south-west	Primary habitat type: composite The site is a mosaic of woodland, scrub and grassland habitat crossed by Annick Water and with Swinzie Burn flowing through the centre. The surrounding land use is primarily commercial forestry and agricultural land.	None
Queenseat Hill to Drumduff Hill	2.55 km east	Main habitats: blanket bog, acid grassland, marshy grassland, standing water, running water Notable habitats: blanket bog, marshy grassland Notable species: Round-leaved Sundew, Tall Bog-sedge (<i>Carex magellanica</i>), Haworth's Minor (<i>Celaena haworthii</i>), Veilwort (<i>Pallavicinia lyellii</i>) Reason for designation: a very large area of blanket bog (UKBAP Priority habitat) and associated habitats	None



LNCS	Distance from Site	Description	Hydrological Connectivity with the Site
		The site comprises a reservoir and an extensive area of grassland, marshy and boggy habitats and a large wind farm.	
Bennan Loch	2.65 km east	No further information available.	None
Totherick	2.86 km north-west	Primary Habitat Type: grasslands This site is predominantly improved or marshy grassland with much of it utilised as grazing grounds for livestock. The fields are generally separated by intact but species-poor hedgerows of hawthorn, beech and/or gorse. Small areas of broadleaf and mixed woodland are present within the south of the site and contain tree species such as beech, Scots pine and sycamore. Two small areas of scattered willow and hawthorn scrub woodland are present in the west of the site, and scattered lines of willow are present in the east of the site.	None
Ballageich Bog	3.39 km east	Main habitats: blanket bog Notable habitats: blanket bog Notable species: round-leaved sundew Reason for designation: an important area of blanket bog, a UK priority habitat The site is between Lochcraig Reservoir and Bennen Loch, with the bog modified in places through drainage and grazing. There are a number of associated plants and a local rarity.	None
Harelaw Dam	3.47 km north	No further information available.	None
Burnfoot Reservoir	3.74 km south-west	Primary Habitat Type: wetlands The site comprises one valuable freshwater reservoir with marginal vegetation, with open grassland and scrub surrounding the boundary. Balgray Mill Burn crosses the site and a minor road runs adjacent to the north of the site.	None
Carswell Hill	3.84 km north	No further information available.	None
Carsewell Mire	3.85 km north	No further information available.	None
Lochcraig Reservoir	3.88 km east	No further information available.	None
Dunlop House	4.15 km west	Primary Habitat Type: woodland and scrub The eastern section is predominantly a semi-mature semi-natural broadleaf woodland with tree species including beech, sycamore, horse chestnut and elder and a mix of grasses and herbs on the forest floor. The western section has a similar woodland, but the forest floor is improved grassland. A watercourse crosses the western section. Both sections have areas of improved	None



LNCS	Distance from Site	Description	Hydrological Connectivity with the Site
		and poor semi-improved grassland, and cattle have access to the woodland throughout the site.	
Craigenduntun Reservoir	4.2 km south-east	Primary Habitat Type: wetlands The site comprises a reservoir with surrounding forestry, with Whitelee Wind Farm to the south. Duntun Water crosses the site and the wind farm access tracks are located to the north and south.	None
Levern Water - Harelaw	4.2 km north	No further information available.	None
North Moorhouse Grasslands	4.24 km north-east	No further information available.	None
Knockmade Moss	4.29 km north-west	Primary Habitat Type: mires and heaths The site comprises agricultural farmland in the north and east, bog or wetland in the centre, scrub to the east and commercial plantation to the west. Several roads border the site, and Glazert Burn watercourse crosses through the site. The surrounding land comprises similar habitats including scrub, agricultural fields, commercial plantation and a wind farm.	None
Knockmade and Knockenae Mires	4.67 km north-west	Main habitats: marshy grassland, acid grassland, standing water, running water Notable habitats: marshy grassland, swamp Notable species: red pondweed (<i>Potamogeton alpinus</i>), lesser tussock-sedge (<i>Carex diandra</i>), brown sedge (<i>Carex disticha</i>), tussock-sedge (<i>Carex paniculata</i>), fen bedstraw (<i>Galium uliginosum</i>), bitter-vetch (<i>Lathyrus linifolius</i>) The site is a large area of marshy grassland west of the Neilston to Dunlop road, with patches of acidic grassland, small ponds and boggy areas, with a wide range of associated plants.	None
Harelea Moss	4.71 km north-east	No further information available.	None
Pilmuir Reservoir	4.85 km north-east	No further information available.	None
Neilston Pad	4.94 km north	Main habitats: acid grassland, neutral grassland, marshy grassland, wet heath, mixed woodland, deciduous woodland Notable habitats: acid grassland, neutral grassland Notable species: Moonwort (<i>Botrychium lunaria</i>) Frog Orchid (<i>Coeloglossum viride</i>), Parsley Fern (<i>Cryptogramma crispa</i>), Adder's-tongue (<i>Ophioglossum vulgatum</i>), Brown Hare (<i>Lepus euroaeus</i>) Reason for designation: a range of hilly grasslands (mainly acid and marshy) with a number of locally rare plants	None



LNCS	Distance from Site	Description	Hydrological Connectivity with the Site
		The site is a low hill comprising grassland with some scattered mixed woodland. There are a number of rocky outcrops and slopes adding variety to the habitat types.	

2.3 Ancient Woodland

There are a number of areas of ancient woodland (as present on the Ancient Woodland Inventory (AWI)) within 5 km of the Site, but none within the Site; the closest being 3.77 km to the north of the Site on the northern slopes of Dod Hill (see **Figure 7.1**).

The definition of ancient woodland is land that is currently wooded and has been continually wooded at least since 1750. It is not related to the age of the trees that are currently growing there, and they do not have to be ancient or elderly, as it is the historical continuity of the woodland habitat that makes a woodland ancient. The AWI holds information on the location and extent of ancient woodland within Scotland, and categorises each stand as follows:

- **Ancient Woodland (1a and 2a)** - Interpreted as semi-natural woodland from maps of 1750 (1a) or 1860 (2a) and continuously wooded to the present day. If planted with non-native species during the 20th century they are referred to as Plantations on Ancient Woodland Sites (PAWS);
- **Long-established woodlands of plantation origin (LEPO) (1b and 2b)** - Interpreted as plantation from maps of 1750 (1b) or 1860 (2b) and continuously wooded since. Many of these sites have developed semi-natural characteristics, especially the oldest stands, which may be as rich as ancient woodland; and
- **Other woodlands on Roy maps (3)** - Shown as un-wooded on the 1st Edition of the Ordnance Survey maps (produced in circa 1850) but as woodland on the Roy maps (produced in circa 1750). Such sites have, at most, had only a short break in continuity of woodland cover and may still retain features of ancient woodland.

The majority of ancient woodland within 5 km of the Site is categorised as Long-Established (of planted origin), with a few small patches of Ancient (of semi-natural origin).

2.4 Carbon and Peatland Map 2016

The Carbon and Peatland Map 2016³ was consulted to determine likely peatland classes present within the Site and surrounding area. The map is a predictive tool that provides an indication of the likely presence of peat at a coarse scale. The Carbon and Peatland map has been developed as a high-level planning tool and identifies areas of nationally important

³ SNH (2016). Carbon and Peatland 2016 map. Available at: <https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/soils/carbon-and-peatland-2016-map> (Accessed: March 2026).



carbon-rich soils, deep peat and priority peatland habitat⁴ as Class 1⁵ and Class 2⁶ peatlands.

Figure 7.2 indicates that, according to this predictive tool and map, there is one area of Class 1 peatland within the Site, which is located in the open area at Glenouther Moor within the north-west. The majority of the Site consists of Class 5⁷ soils. A smaller area of Class 4⁸ peatland is present in the north and a strip of Class 0 (mineral)⁹ soils runs along the southern boundary in the Swinzie Burn corridor. No Class 2 or Class 3¹⁰ peatland is present within the Site.

3.0 Methodology

3.1 National Vegetation Classification

The vegetation was surveyed by suitably qualified and experienced botanical surveyors using the NVC scheme¹¹ and in accordance with NVC survey guidelines¹². The NVC scheme provides a standardised system for classifying and mapping semi-natural habitats and ensures that surveys are carried out to a consistent level of detail and accuracy.

Homogeneous stands and mosaics of vegetation were identified and mapped by eye and drawn as polygons on high resolution aerial imagery field maps. These polygons were surveyed qualitatively to record dominant and constant species, sub-dominant species and other notable species present. The surveyors worked progressively across the survey area to ensure that no areas were missed, and that mapping was accurate. NVC communities were attributed to the mapped polygons using surveyor experience and matching field data against published floristic tables¹¹. Stands were classified to sub-community level where possible, although in many cases the vegetation was mapped to community level only because the vegetation was too species-poor or patches were too small to allow meaningful sub-community determination; or because some areas exhibited features or fine-scale patterns of two or more sub-communities.

Quadrat sampling was not used in this survey because experienced NVC surveyors do not need to record quadrats in order to reliably identify NVC communities and sub-communities¹². Notes were made about the structure and flora of larger areas of vegetation in many places (such as the abundance and frequency of species, and in some cases condition and evident anthropogenic impacts). It can be better to record several larger scale qualitative samples than one or two smaller quantitative samples; furthermore, qualitative

⁴ Priority peatland habitat is land covered by peat-forming vegetation or vegetation associated with peat formation.

⁵ Class 1 - Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas likely to be of high conservation value. Indicative vegetation – Peatland.

⁶ Class 2 - Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas of potentially high conservation value and restoration potential. Indicative vegetation – Peatland or areas with high potential to be restored to peatland.

⁷ Class 5 - Soil information takes precedence over vegetation data. No peatland habitat recorded.

⁸ Class 4 - Area unlikely to be associated with peatland habitats or wet and acidic type. Area unlikely to include carbon-rich soils. Indicative vegetation - heath with some peatland.

⁹ Mineral soil - Peatland habitats are not typically found on such soils (Class 0). Indicative vegetation - no peatland vegetation.

¹⁰ Class 3 - Dominant vegetation cover is not priority peatland habitat but is associated with wet and acidic type. Occasional peatland habitats can be found. Most soils are carbon-rich soils, with some areas of deep peat.

¹¹ Rodwell, J.S. (Ed), et al. (1991 – 2000). British Plant Communities (5 volumes). Cambridge University Press, Cambridge.

¹² Rodwell, J.S. (2006). NVC Users' Handbook. ISBN 978 1 86107 574 1.



information from several sample locations can be vital for understanding the dynamics and trends in local vegetation patterns¹².

Due to small scale vegetation and habitat variability and numerous zones of habitat transitional between similar NVC communities, many polygons can represent complex mosaics of two or more NVC communities. Where polygons have been mapped as mosaics an approximate percentage cover of each NVC community within the polygon is given so that the dominant community and character of the vegetation could still be ascertained.

3.2 Phase 1 Habitat Characterisation

The NVC and mapping data was also correlated to their equivalent habitats according to the Phase 1 habitat classification¹³, considering the species composition and habitat quality. The Phase 1 characterisation has been utilised to allow a broader visual representation of the habitats within the survey area. Polygons or areas where there are mosaic NVC communities have generally been assigned a single Phase 1 classification based on the dominant NVC type (despite some polygons containing multiple Phase 1 types, often in low percentages). Therefore, the Phase 1 characterisation is generally a broader overview, and the NVC data should be referred to for further detail in any specific area.

Botanical nomenclature in this report follows that of Stace (2019)¹⁴ for vascular plants, Atherton *et al.* (2010)¹⁵ for bryophytes and Smith *et al.* (2009)¹⁶ for lichens.

4.0 Survey Details and Limitations

Surveys were undertaken on 15 May 2024 and were therefore carried out during the optimal season for habitat surveys. The weather conditions were bright, with broken cloud and relatively light to moderate winds. All parts of the survey area were accessible.

The NVC system does not cover all possible semi-natural vegetation or habitat types that may be found. Since the NVC was adopted for use in Britain in the 1980's further survey work and an increased knowledge of vegetation communities has led to additional communities being described that do not fall within the NVC system (e.g., see Rodwell *et al.*, 2000¹⁷; Averis *et al.*, 2004¹⁸; Mountford, 2011¹⁹; and Averis and Averis, 2020²⁰). Where such

¹³ Joint Nature Conservancy Council (JNCC). (2010). Handbook for phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough.

¹⁴ Stace, C.A. (2019). New Flora of the British Isles. 4th Edition. Cambridge University Press.

¹⁵ Atherton, I., Bosanquet, S. & Lawley, M. (2010). Mosses and Liverworts of Britain and Ireland: a field guide. British Bryological Society.

¹⁶ Smith, C.W., Aptroot, A., Coppins, B.J., Fletcher, A., Gilbert, O.L., James, P.W. & Wolseley, P.A. (Eds.) (2009). The Lichens of Great Britain and Ireland. The British Lichen Society.

¹⁷ Rodwell, J., Dring, J.C., Averis, A.B.G., Proctor, M.C.F., Malloch, A.J.C., Schaminee, J.H.J. and Dargie, T.C.D. (2000). Review of coverage of the National Vegetation Classification. JNCC Report, No. 302. JNCC, Peterborough.

¹⁸ Averis, A., Averis, B., Birks, J., Horsfield, D., Thompson, D., & Yeo, M. (2004). An Illustrated Guide to British Upland Vegetation. JNCC, Peterborough. ISBN 1 86107 553 7.

¹⁹ Mountford, E. (2011). A compilation of proposed additions and revisions to vegetation types in the National Vegetation Classification, JNCC Report No. 448. JNCC, Peterborough, ISBN 0963-8091

²⁰ Averis, B and Averis, A. (2020). Plant Communities found in surveys by Ben and Alison Averis but not described in the UK National Vegetation Classification. Available at: http://www.benandalisonaveris.co.uk/wp/wp-content/uploads/2020/11/non-nvc_vegetation_types_found_by_ben_and_alison_averis_2020-06_version_with_image_resolution_reduced.pdf (Accessed: March 2026).



communities are found and recorded, they are given a non-NVC community code and are described.

It should be noted that the results from this survey, and the matches made in describing communities, represent a current community evaluation at the time of survey (as opposed to one seeking to describe what the community was before any human interference, or what it might become in the future). In light of this, a clear constraint of the vegetation survey and evaluation process as used in this and other surveys is that it offers only a snapshot of the vegetation communities present and should not be interpreted as a static long-term reference.

Ecological surveys are limited by factors which affect the presence of plants such as the time of year and weather. The ecological surveys undertaken to inform this project have not therefore produced a complete list of plants and the absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future. However, the results of these surveys are considered to be sufficient to undertake the assessment.

5.0 Results

5.1 Summary of Habitat Types & NVC Communities

12 NVC communities and six non-NVC communities were recorded within the survey area, and these corresponded to 13 Phase 1 habitat types. These communities and habitat types, and their respective correlations specific to the survey area are summarised below in **Table 5-1**.

Table 5-1 Phase 1 habitat type equivalents of NVC communities and other habitats recorded

Phase 1 Habitats	NVC Communities & Other Non-NVC Habitats/Features Recorded
A1.1.1 Broadleaved Semi-Natural Woodland	W4 <i>Betula pubescens</i> – <i>Molinia caerulea</i> woodland W17 <i>Quercus petraea</i> – <i>Betula pubescens</i> – <i>Dicranum majus</i> woodland
A1.1.2 Broadleaved Plantation Woodland	W15(p) ²¹ <i>Fagus sylvatica</i> - <i>Deschampsia flexuosa</i> woodland
A1.2.2 Coniferous Plantation Woodland	CP Coniferous Plantation (non-NVC type)
A3.2 Scattered Conifer Trees	SCT Scattered Conifer Tree (non-NVC type)
B1.1 Unimproved Acid Grassland	U4 <i>Festuca ovina</i> – <i>Agrostis capillaris</i> – <i>Galium saxatile</i> grassland
B1.2 Semi-Improved Acid Grassland	U4b <i>Festuca ovina</i> – <i>Agrostis capillaris</i> – <i>Galium saxatile</i> grassland <i>Holcus lanatus</i> – <i>Trifolium repens</i> sub-community

²¹ The suffix (p) indicates that although the area has been attributed a NVC code and the vegetation is broadly referable to that community, the area is clearly, or very likely, of plantation origin and therefore not semi-natural.



Phase 1 Habitats	NVC Communities & Other Non-NVC Habitats/Features Recorded
B5 Marsh/Marshy Grassland	M23 <i>Juncus effusus/acutiflorus</i> – <i>Galium palustre</i> rush-pasture M25 <i>Molinia caerulea</i> – <i>Potentilla erecta</i> mire Je <i>Juncus effusus</i> acid grassland community (non-NVC type)
C3.1 Tall Herb & Fern: Tall Ruderal	OV25 <i>Urtica dioica</i> – <i>Cirsium arvense</i> community
E1.6.1 Blanket Bog	M18 <i>Erica tetralix</i> – <i>Sphagnum papillosum</i> blanket mire
E1.7 Wet Modified Bog	M19 <i>Calluna vulgaris</i> – <i>Eriophorum vaginatum</i> blanket mire M20 <i>Eriophorum vaginatum</i> blanket mire M25a^ <i>Molinia caerulea</i> – <i>Potentilla erecta</i> mire <i>Erica tetralix</i> sub-community ²² PC <i>Polytrichum commune</i> (non-NVC type)
E2.1 Acid/Neutral Flush/Spring	M4 <i>Carex rostrata</i> - <i>Sphagnum fallax</i> mire M6 <i>Carex echinata</i> - <i>Sphagnum fallax/denticulatum</i> mire
G2 Running Water	RW Running Water (non-NVC type)
J4 Bare Ground	BG Bare Ground, Tracks, Hardstandings etc (non-NVC type)

The following sections describe each of these Phase 1 habitat types and the communities underpinning these within the survey area. Habitats are described in the order they appear within the Phase 1 classification. The survey results are displayed in **Figure 7.3.2-7.3.6** which combines Phase 1 symbology with NVC data.

A number of target notes (TNs) were also made during surveys, often to pinpoint areas or species of special interest. These target notes are shown in **Figure 7.3.2-7.3.6** and detailed within **Annex A**. Target note photographs are included within **Annex B**. Further photographs of several typical habitat types found within the survey area are provided within **Annex C**.

5.2 Woodland & Scrub

5.2.1 A1.1.1 Broadleaved Semi-Natural Woodland

Semi-natural broadleaved woodland is very limited within the survey area and is restricted to one small narrow strip along the western boundary of the survey area, and outwith the Site. This is a mosaic of W4 *Betula pubescens* – *Molinia caerulea* woodland and W17 *Quercus petraea* – *Betula pubescens* – *Dicranum majus* woodland.

The W4 woodland was recorded at community level with a canopy of *Betula* sp. growing from an occluded ditch infilled with *Sphagnum fallax* and occasional *Juncus effusus*, *Carex nigra* and *Carex rostrata*. The W17 was classified as the W17b typical sub-community. This consisted of a *Betula* sp. canopy growing over a dry bank of *Vaccinium myrtillus*. The

²² Areas of M25a^ are classified as wet modified bog where generally appearing on peat of greater than 0.5 m in depth or containing a notable abundance of characteristic bog species, in particular *Eriophorum vaginatum*. In these circumstances, the M25a is denoted with a caret; i.e., M25a^. Whereas marshy grassland is identified as M25a (no caret).



mosses present include *Dicranum scoparium*, *Pleurozium schreberi*, *Hylocomium splendens*, *Rhytidiadelphus loreus*, *Rhytidiadelphus squarrosus*, and *Hypnum* sp.

5.2.2 A1.1.2 Broadleaved Plantation Woodland

Broadleaved plantation woodland was only recorded in one location, a very small patch in the far west of the survey area. This area of woodland is most closely referable to W15(p) *Fagus sylvatica* - *Deschampsia flexuosa* woodland and consists of an old bank of mature *Fagus sylvatica* by a small streamside, of a planted origin. There is no understorey and very little field flora, mostly just litter and bare soil. There are only occasional ferns and grasses underneath, with occasional patches of moss (*Polytrichum* sp. and pleurocarpous mosses), with quite abundant *Claytonia sibirica* present.

5.2.3 A1.2.2 Coniferous Plantation Woodland

The majority of the survey area consists of large areas of planted commercial coniferous plantation woodland (CP). These plantation woodlands are mostly dominated by *Picea sitchensis*. Despite being several decades old, the majority of the conifers within the survey area are relatively stunted and poorly-grown as a result of being planted in sub-optimal conditions over deep peat.

These types of typically dense plantation woodlands are of negligible botanical and ecological value due to over-shading and loss of the field flora. However, in some areas on the deepest peats the plantation is so poorly growing and checked that there are often substantial areas of remnant peatland vegetation persisting under the shorter and more open canopy, consequently making these areas suitable candidates for future forest to bog peatland restoration measures with a high likelihood of success.

5.2.4 A3.2 Scattered Coniferous Tree

Occasionally some habitats have individual or several clusters of scattered coniferous trees (SCT) forming a minor part of the vegetative composition. These individual or small groups of trees were not of a scale to be mapped as woodland. The scattered conifer trees tend to be young *Picea sitchensis* that have self-seeded from the large commercial forestry blocks within the survey area and are very commonplace within the forestry rides, they are also encroaching into the open blanket bog area of Glenouther Moor, especially in the south-eastern corner.

5.3 Grasslands & Marsh

5.3.1 B1.1/B1.2 Unimproved & Semi-Improved Acid Grassland

Unimproved acid grassland was very scarce within the survey area, being restricted to only one area along the banks of Swinzie Burn in the south-west, and outwith the Site. There were also some small patches of more semi-improved acid grassland present, which were localised to the edge of the survey area where the coniferous plantation transitioned to open ground.

The unimproved acid grassland (B1.1) within the survey area is the U4a *Festuca ovina* – *Agrostis capillaris* – *Galium saxatile* grassland, typical sub-community. This contained a variable mix of *Agrostis capillaris*, *Festuca ovina* and *Anthoxanthum odoratum*. The herbs *Potentilla erecta* and *Galium saxatile* are common, and in some stands there can also be smaller quantities of other vascular species such as *Holcus lanatus*, *Nardus stricta*, *Avenella flexuosa*, *Cynosurus cristatus*, *Juncus squarrosus*, *Prunella vulgaris*, *Ranunculus repens*, *Cerastium fontanum*, *Achillea millefolium*, *Trifolium repens*, *Luzula* spp., and *Cirsium* spp. Mosses are frequent, especially *Pleurozium schreberi* and *Rhytidiadelphus squarrosus*.



Areas of semi-improved acid grassland (B1.2) are characterised by the U4b *Holcus lanatus*-*Trifolium repens* sub-community. The sward tends to be dominated by a semi-improved assemblage which includes typical species such as *Holcus lanatus*, *Anthoxanthum odoratum*, *Agrostis* spp., *Cynosurus cristatus*, *Lolium perenne*, *Trifolium repens* and *Ranunculus repens*.

5.3.2 B5 Marsh/Marshy Grassland

Marshy grassland is habitat that includes several different sward types in which *Molinia caerulea*, *Juncus* spp. and/or *Carex* spp. can be prominent. This habitat type is mostly restricted to the narrow zone around watercourses and forestry rides at the edge of the survey area. These communities also occasionally form mosaics and transitional areas with each other, in particular the rush-dominated areas, and there is also one instance of it forming a mosaic with M19 wet modified bog (see Section 5.5.2). M23b is the most abundant and extensive marshy grassland community within the survey area.

The main rush-dominated communities present are M23b *Juncus effusus*/*acutiflorus* – *Galium palustre* rush-pasture, *Juncus effusus* sub-community and the non-NVC type *Juncus effusus* acid grassland (Je). There are also two patches of M23a *Juncus effusus*/*acutiflorus* – *Galium palustre* rush-pasture *Juncus acutiflorus* sub-community found as minor components of wider flushed mosaics.

Other marshy grassland within the survey area comprises scattered small patches of M25 *Molinia caerulea* – *Potentilla erecta* mire and associated sub-communities.

The areas of M23 are often species poor with *Juncus* spp. being the dominant species, and it regularly grades in and out of Je (see below). Generally, areas of M23 are dominated by mixtures of *Juncus acutiflorus* and/or *Juncus effusus* with patches of a low diversity of grasses such as *Holcus lanatus* and *Molinia caerulea*. Within the sward, a variety of other graminoids and herbs are more occasional to rare and included *Cirsium palustre*, *Rumex acetosa*, *Ranunculus repens*, *Angelica sylvestris*, *Urtica dioica*, *Equisetum arvense*, *Epilobium palustre*, *Galium palustre*, *Potentilla palustris* and *Carex* spp. Wefts of mosses are also common through M23 between these species including *Rhytidiadelphus squarrosus*.

The 'Je' non-NVC marshy grassland community is present here as patches of a *Juncus* spp. dominated calcifuge grassland, at times found as a small component of a wider mosaic with other grassland and mire communities. This is vegetation in which dominant and tall *Juncus effusus* grow abundantly among a few shorter 'acid grassland' swards including frequent to occasional *Agrostis capillaris*, *Holcus lanatus*, *Rumex acetosa*, *Potentilla erecta* and *Galium saxatile*. Other occasional species include *Carex nigra*, *Molinia caerulea* and *Ranunculus repens*. Mosses typical of acid communities are also abundant, the most common mosses are *Hylocomium splendens*, *Pleurozium schreberi*, *Polytrichum commune*, *Pseudoscleropodium purum* and *Rhytidiadelphus squarrosus*. This vegetation does not fit into any NVC community as it lacks the wetland element and key indicators of M6 and M23 *Juncus* spp. mires and has a more acidophilous flora than MG10 *Juncus effusus* rush-pasture; it is therefore classed separately.

The M25 NVC community was classified as marsh/marshy grassland where it was present at the community level, the M25a *Erica tetralix* (when likely on shallow peaty soil) and M25b *Anthoxanthum odoratum* sub-communities. These were areas either wholly dominated by *Molinia caerulea* (M25) or where *Molinia caerulea* was accompanied by a mixture of heath species (M25a) or grassland species (M25b). Other species recorded in M25a included lesser amounts of *Trichophorum germanicum*, *Erica tetralix*, *Calluna vulgaris*, *Narthecium ossifragum*, *Potentilla erecta*, *Galium saxatile* and *Vaccinium myrtillus*; the basal layer often included *Sphagnum fallax*, *S. capillifolium*, *Polytrichum commune* and *Pleurozium schreberi*. The M25b was co-dominated by *Molinia caerulea* and *Juncus effusus* in places. Other



species present in variable abundance in M25b included *Potentilla erecta*, *Galium saxatile*, *Vaccinium myrtillus*, *Carex nigra*, *Rumex acetosa* and occasional ferns; the mosses *Hylocomium splendens*, *Rhytidiadelphus squarrosus*, *Polytrichum commune* and *Pleurozium schreberi* are also common. M25a and M25b areas tend to be found on shallow peaty/organo-mineral soils.

5.4 Tall Herb & Fern

5.4.1 C3.1 Tall Ruderal

Within the survey area this habitat type is represented by one patch of the OV25 *Urtica dioica* – *Cirsium arvense* NVC community along the bank of Swinzie Burn in the far south-west. This area is dominated by *Urtica dioica* with several grass species throughout.

5.5 Mire

5.5.1 E1.6.1 Blanket Bog

An extensive area of blanket bog habitat was recorded within the survey area. This habitat formed a relatively large open area surrounded by plantation in the centre of the survey area which is in the north-west of the Site (see **Figure 7.3.5**). To a much lesser extent, several small, scattered areas of blanket bog were found as minor components of mosaics with wet modified bog within forestry rides. A number of blanket mire NVC communities (i.e. M19, M20, M25a[^]) that are sometimes classified as blanket bog depending on site-specific characteristics were also recorded during the survey, however in this case they have been classified as wet modified bog (E1.7). The reasons for this classification are discussed in Section 5.5.2 below.

All of the blanket bog across the survey area was classified as M18 *Erica tetralix* – *Sphagnum papillosum* blanket mire and was recorded at the community level only. The species present in the main expanse in the centre of the survey area include *Calluna vulgaris*, *Eriophorum vaginatum*, *E. angustifolium*, *Erica tetralix*, *Trichophorum germanicum*, *Narthecium ossifragum*, *Vaccinium myrtillus*, *Drosera rotundifolia*, *Vaccinium oxycoccos* and *Andromeda polifolia*. Mosses include *Sphagnum papillosum*, *S. medium*, *S. capillifolium*, *S. fallax*, *Aulacomnium palustre*, *Polytrichum strictum*, *Hypnum* sp., and occasional lichens. This area could be classified as an intricate mosaic of M18 and M17 *Trichophorum germanicum* – *Eriophorum vaginatum* blanket mire, or as an intermediate of these communities. However, due to the abundance of *Vaccinium oxycoccos*, the frequent-occasional *Sphagnum medium* and the presence of *Andromeda polifolia*, the vegetative assemblage was more closely aligned and characteristic of the M18 blanket bog community.

The large area of M18 blanket bog in the centre of the survey area is in relatively good condition and does not appear to have been significantly impacted by grazing or drainage and lacks any significant hagg or gully features. It generally has a near-natural surface pattern, although bog pools were not found to be present. There are some wetter hollows, *Sphagnum* lawns and some notable sized *Sphagnum capillifolium* hummocks. However, due to the encirclement by dense commercial plantation and indirect effects of such plantations, it is likely it has had some negative effects on the main area of blanket bog present. For example, there is some self-seeded conifer invasion and encroachment around the edge from the bordering plantation. There were some deer tracks and deer dung present across the blanket bog, but the overall grazing impact appears low. As discussed further in Section 5.5.2 below, several areas of habitat along forestry rides that would ordinarily be classified as blanket bog are in much poorer condition and have thus been classified as wet modified bog.



5.5.2 E1.7 Wet Modified Bog

Wet modified bog is found throughout the survey area and is the predominant habitat type along the open rides that run through the coniferous plantation. It is mostly represented by the M19 *Calluna vulgaris* – *Eriophorum vaginatum* blanket mire community. Smaller areas of M20 *Eriophorum vaginatum* blanket mire community were also noted, as well as the M25a[^] *Molinia caerulea* – *Potentilla erecta* mire *Erica tetralix* sub-community. Small areas of the non-NVC *Polytrichum commune* ('PC') community were also recorded. Most of the wet modified bog was found as homogenous stands, but some areas also formed mosaics with marshy grassland and acid/neutral flush communities. Most of the wet modified bog along the forestry rides appears to have been derived from blanket bog but has been severely degraded by the negative influence of the commercial forestry, which includes shading effects, drainage and a proliferation of small self-seeded conifers.

The areas of M19 were represented at the community level only and were generally dominated by *Calluna vulgaris* and *Eriophorum vaginatum*, although the latter becomes sparser in places. Other species present include *Empetrum nigrum*, *Eriophorum angustifolium*, *Vaccinium myrtillus*, *Erica tetralix* and some *Molinia caerulea*, *Trichophorum germanicum*, *Carex nigra* and *Potentilla erecta*. Mosses include *Sphagnum capillifolium*, *S. fallax*, *Hypnum* sp., *Aulacomnium palustre*, *Polytrichum strictum* and *Hylocomium splendens*, with occasional *Cladonia* lichen. The M19 across the survey area is in variable but generally poor condition depending on location; in some places it remains quite wet and with a good cover of *Sphagnum capillifolium* and sparse incidences of *Vaccinium oxycoccos*. This suggests these areas are likely derived from M18 and were once part of a larger M18 macrotope linked to the main open area of blanket bog within the survey area and which was subsequently planted with conifers. These rides and related mire areas have been degraded through the negative influence of the plantation that dominates the survey area. Some of the forestry rides containing M19 have abundant self-seeded conifers scattered throughout.

The M20 across the survey area was recorded at community level only. This is mire vegetation in which tussocks of *Eriophorum vaginatum* are dominant, with only occasional *Calluna vulgaris*, the scarcity of *Calluna vulgaris* precludes its classification as M19. The basal layer in many of these areas was wet and contained abundant *Sphagnum fallax*.

The M25a[^] area was identified due to *Molinia* overwhelmingly dominating the sward but with an associated flora containing some mire species. M25a[^] being classified as wet modified bog and not marshy grassland is due to it generally appearing on peat of greater than 0.5 m in depth or containing more, or higher cover of, species with affinities to blanket bog vegetation (e.g., *Eriophorum vaginatum*). In these circumstances, the M25a is denoted with a caret (i.e., M25a[^]). The majority of the subordinate and associate species found within this M25a[^] assemblage were occasional *Calluna vulgaris*, *Eriophorum vaginatum*, *Erica tetralix*, *Vaccinium myrtillus* and patches of *Sphagnum capillifolium*.

A small number of areas were found to be completely dominated by the moss *Polytrichum commune* with very few other species present aside from small patches of *Sphagnum fallax*. In these cases, the non-NVC community 'PC' was assigned. These areas are generally found in mosaics with other wet modified bog habitat types following forestry rides throughout the survey area.

5.5.3 E2.1 Acid/Neutral Flush/Spring

Acid/neutral flushes are infrequently scattered throughout the survey area, tending to follow minor watercourses and drainage lines. The largest patches are generally located in the south of the survey area and follow a minor tributary of the Swinzie Burn. They also occasionally form mosaics and transitional areas with the *Juncus* spp. dominated marshy grassland communities (see Section 5.3.2). The majority of this habitat is represented by M6



Carex echinata – *Sphagnum fallax/denticulatum* mire. The M6 within the survey area is predominately of the M6c *Carex echinata* – *Sphagnum fallax/denticulatum* mire, *Juncus effusus* sub-community, however the M6d *Juncus acutiflorus* sub-community is also present as a minor component of one patch of a *Juncus*-dominated flushed mosaic. The M4 *Carex rostrata* - *Sphagnum fallax* mire community was also recorded less frequently across the survey area.

The M6c and M6d communities are rush mires on wet ground. A tall sward of *Juncus effusus* over a species-poor lawn of *Sphagnum fallax* and *Polytrichum commune* indicates the M6c sub-community; *J. acutiflorus* dominates in M6d. In many stands its extent encompasses little more than these species listed. Where other species were recorded, they tended to be of very low cover, and included typical species such as *Rumex acetosa*, *Molinia caerulea*, *Myosotis secunda*, *Ranunculus repens*, *Cirsium palustre* and *Carex* spp.

The small patches of M4 were recorded as homogenous stands and also as components of wider flushed mosaics. They are characterised by *Carex rostrata* and *C. nigra* with a basal layer composed of *Sphagnum fallax* and *Polytrichum commune*.

5.6 Open Water

5.6.1 G2 Running Water

The only watercourse of running water (RW) large enough to record within the survey area was Swinzie Burn in the south-west.

5.7 Miscellaneous

5.7.1 J4 Bare Ground

Bare ground (BG) is a non-NVC community and includes one small area of an existing track and hardstanding in the far east of the survey area. This area was largely devoid of vegetation and thus could not be classified as any other habitat.

5.8 Invasive Non-Native Species

No INNS were incidentally recorded during the habitat surveys; however, this does not preclude their presence from the survey area.

5.9 Notable Species

Andromeda polifolia was found growing within the main area of M18 blanket bog in the centre of the survey area (see **Annex A**, TN 3). *A. polifolia* is a low evergreen shrub that grows in moist to wet acidic peaty ground. Although the species is classified as 'Least Concern' in the Vascular Plant Red Data List for Great Britain²³, the Site is towards the northernmost extent of its range in Great Britain, and it is thus relatively scarce in the region.

²³ Cheffings, C.M. & Farrell, L. (eds), Dines, T.D., Jones, R.A., Leach, S.J., McKean, D.R., Pearman, D.A., Preston, C.D., Rumsey, F.J., Taylor, I. 2005. The Vascular Plant Red Data List for Great Britain. Species Status No. 7. JNCC, Peterborough, ISSN 1473-0154.



6.0 Evaluation of Botanical Interest

6.1 Overview

NVC communities can be compared with a number of habitat classifications to help in the assessment of the sensitivity and conservation interest of certain areas. The following sections compare the survey results and the NVC communities identified against three classifications:

- SEPA guidance on Groundwater Dependent Terrestrial Ecosystems (GWDTEs);
- Habitats Directive (92/43/EEC) Annex I habitats; and
- Scottish Biodiversity List (SBL) priority habitats.

6.2 Groundwater Dependent Terrestrial Ecosystems (GWDTE)

SEPA has classified a number of NVC communities as potentially dependent on groundwater²⁴. Many of the NVC communities on the list are very common habitat types across Scotland, and some are otherwise generally of low ecological value. Furthermore, some of the NVC communities may be considered GWDTE only in certain hydrogeological settings.

Designation as a potential GWDTE does not therefore infer an intrinsic biodiversity value, and GWDTE status has not been used as criteria to determine a habitat's respective conservation importance. There is, however, a statutory requirement to consider GWDTEs, and the data gathered during the NVC surveys has been used to inform this assessment (see **Chapter 9: Hydrology, Hydrogeology, Geology and Peat**).

Using SEPA's (2024)²⁴ guidance, **Table 6-1** shows which communities recorded within the survey area may be considered a potential GWDTE.

Table 6-1 Communities within the survey area which may potentially be classified as GWDTE

NVC Code	NVC Community Name
W4	<i>Betula pubescens</i> – <i>Molinia caerulea</i> woodland
M4	<i>Carex rostrata</i> - <i>Sphagnum fallax</i> mire
M6	<i>Carex echinata</i> – <i>Sphagnum fallax/denticulatum</i> mire
M23	<i>Juncus effusus/acutiflorus</i> – <i>Galium palustre</i> rush pasture
Je ²⁵	<i>Juncus effusus</i> acid grassland

The location and extent of all identified potential GWDTE are provided on an appropriate NVC map; see **Figures 7.4.1-7.4.6**.

Within these figures the potential GWDTE classification of each polygon is classified on a three-tier approach as follows:

²⁴ SEPA (2024). Guidance on Assessing the Impacts of Developments on Groundwater Dependent Terrestrial Ecosystems. Available at: <https://www.sepa.org.uk/environment/land/planning/guidance-and-advice-notes/> (Accessed: March 2026).

²⁵ In light of the SEPA classification on potential GWDTEs the non NVC type Je should also qualify for potential GWDTE status; keeping in line with other similar *Juncus* spp. dominated grassland communities (e.g. MG10).



- 'Dominant' where potential GWDTE(s) dominate the polygon (i.e., >50% coverage);
- 'Sub-dominant' where potential GWDTE(s) make up a sub-dominant percentage cover of the polygon (1-50% coverage); and
- 'Non' – no GWDTE(s) within the polygon.

GWDTE potential has been assigned solely on the SEPA listings²⁴. However, depending on a number of factors such as geology, superficial geology, presence of peat and topography, many of the potential GWDTE communities recorded may in fact be only partially groundwater fed or not dependent on groundwater. Determining the actual groundwater dependency of particular areas or habitat requires further assessment (see **Chapter 9**).

6.3 Annex I Habitats

6.3.1 Overview

A number of NVC communities can also correlate to various Annex I habitat types. However, the fact that an NVC community can be attributed to an Annex I type does not necessarily mean all instances of that NVC community constitute Annex I habitat. Its Annex I status can depend on various factors such as quality, extent, species assemblages, geographical setting and substrates.

Using Joint Nature Conservation Committee (JNCC) Annex I habitat listings and descriptions²⁶, which have then been compared with survey results and field observations, the following NVC communities within the survey area which may constitute Annex I habitat are shown in **Table 6-2**.

Table 6-2 Annex I Habitats and corresponding NVC communities

Annex 1 Habitat	Corresponding NVC Communities & Other Non-NVC Habitats/Features Recorded
7130 Blanket bog	M18 <i>Erica tetralix</i> – <i>Sphagnum papillosum</i> blanket mire M19 <i>Calluna vulgaris</i> – <i>Eriophorum vaginatum</i> blanket mire M20 <i>Eriophorum vaginatum</i> blanket mire M25 ^A <i>Molinia caerulea</i> – <i>Potentilla erecta</i> mire
7140 Transition mires and quaking bogs	M4 <i>Carex rostrata</i> - <i>Sphagnum fallax</i> mire

Further details on the inclusion or omission of certain NVC communities/sub-communities and/or Annex I types are also provided below.

6.3.2 7130 Blanket Bog

The blanketing of the ground with a variable depth of peat gives the habitat type its name and results in the various morphological types according to their topographical position. Blanket bogs show a complex pattern of variation related to climatic factors, particularly illustrated by the variety of patterning of the bog surface in different parts of the UK. Such climatic factors also influence the floristic composition of bog vegetation.

'Active' bogs are defined as supporting a significant area of vegetation that is normally peat-forming. Typical species include the important peat-forming species, such as *Sphagnum* spp. and *Eriophorum* spp., or *Molinia caerulea* in certain circumstances, together with

²⁶ Available at: <https://sac.jncc.gov.uk/habitat/> (Accessed: March 2026).



Calluna vulgaris and other ericaceous species. The most abundant NVC blanket bog types are M17, M18, M19, M20 and M25.

Annex I type 7130 Blanket bog therefore correlates directly with a number of NVC communities within the survey area such as M18, M19, M20 and M25a[^]. However, as discussed further in Section 5.5.1 and Section 5.5.2, with the exception of the large open area of M18 in the centre of the survey area, these communities are restricted to forestry rides and are in poor condition, having been subject to the negative influence of commercial forestry.

As noted above, M25a[^] mire can also fall within the blanket bog Annex I type, usually where the underlying peat depth is greater than 0.5 m and the habitat is wet and contains peat forming species. These areas (denoted here as M25a[^] - see Section 5.5.2) have also been classified as potential Annex I blanket bog, to represent a worst-case scenario.

6.3.3 7140 Transition mires and quaking bogs

All examples of M4 *Carex rostrata* - *Sphagnum fallax* mire within the survey area were assigned to the Annex I type Transition mires and quaking bogs. The term 'transition mire' relates to vegetation that in floristic composition and general ecological characteristics is intermediate between acid bog and alkaline fen.

6.4 Scottish Biodiversity List Priority Habitats

The SBL is a list of species and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. The SBL was first published in 2005 with updates in 2007, 2012, and most latterly revised in December 2025 to satisfy the requirement under Section 2(4) of The Nature Conservation (Scotland) Act 2004²⁷. The most recent SBL revision has been developed from scratch, and it is shorter and more targeted; reduced from more than 2,000 species and habitats on the previous list to less than 500 on the current revised list.

The SBL identifies habitats which are important to furthering the conservation of biodiversity in Scotland: these are termed 'priority habitats'. The names of many priority habitat types have changed from the previous list, and it appears many of the underpinning habitat or community types that comprise these priority types are also likely to have been revised, changed or reduced. Whilst the previous iteration of the SBL provided associated priority habitat definition documents outlining the habitat type, where it occurs, its characteristics, and the associated correlations with Phase 1, NVC and UK BAP habitat types, the most recent revision has not provided such supporting information (at the time of preparation of this technical appendix). Therefore, at the current time and until such information is made available, it is not possible to definitively or accurately correlate the results of this survey, and the habitat types present within the Site or survey area to the revised SBL priority habitat types.

6.5 Sensitivity Summary

Table 6-3 provides a summary of all the NVC communities and non-NVC types recorded within the survey area and any associated correlations to potential GWDTE and Annex I habitats, as described in the sections above.

²⁷ 2004 asp 6 (Acts of the Scottish Parliament) Nature Conservation (Scotland) Act 2004.
<https://www.legislation.gov.uk/asp/2004/6/contents>



Table 6-3 Summary of survey area communities and sensitivities

NVC/Non-NVC Codes Recorded	Potential GWDTE	Annex I Habitat
Mires		
M4	Yes	7140 Transition mires and quaking bogs
M6c, M6d	Yes	n/a
M18	n/a	7130 Blanket bogs
M19	n/a	7130 Blanket bogs
M20	n/a	7130 Blanket bogs
M23a, M23b	Yes	n/a
M25, M25a, M25b, M25a^	n/a	7130 Blanket bogs (where peat depth >0.5 m)
Calcifugous Grasslands		
U4a, U4b	n/a	n/a
Woodland & Scrub		
W4	Yes	n/a
W15(p)	n/a	n/a
W17b	n/a	n/a
Vegetation of Open Habitats		
OV25	n/a	n/a
Non-NVC Types		
BG	n/a	n/a
CP	n/a	n/a
Je	Yes	n/a
PC	n/a	n/a
RW	n/a	n/a
SCT	n/a	n/a

7.0 Summary

MacArthur Green (now SLR¹) carried out NVC and habitat surveys within the survey area on the 15 May 2024 in order to identify those areas of vegetation communities with the greatest ecological or conservation interest.

In total 12 NVC communities were recorded within the respective survey area along with various associated sub-communities; six non-NVC habitat types are also present, in particular coniferous plantation woodland which is extensive. Only a small number of communities or habitat types account for the majority of the survey area.

The largest area of open habitat outwith the coniferous plantation is an expanse of M18 *Erica tetralix* – *Sphagnum papillosum* blanket mire within the centre of the survey area. Wet modified bog, marshy grassland and acid/neutral flushes form much of the remaining habitats.



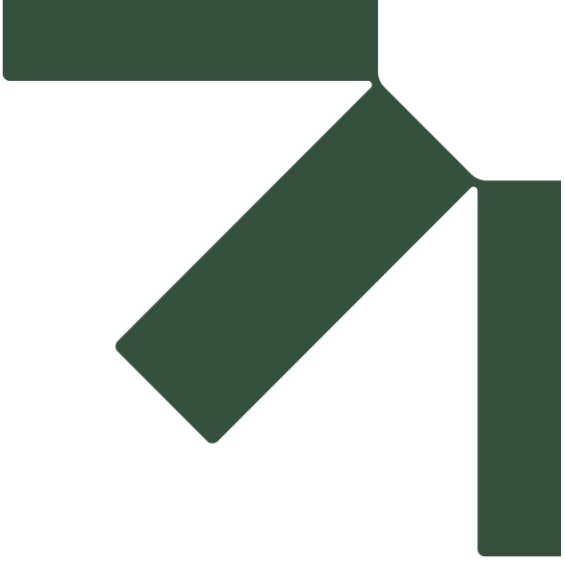
The survey results have also been compared to a number of sensitivity classifications, indicating the presence of Annex I and potential GWDTE habitats, as summarised in **Table 6-3**.



8.0 References

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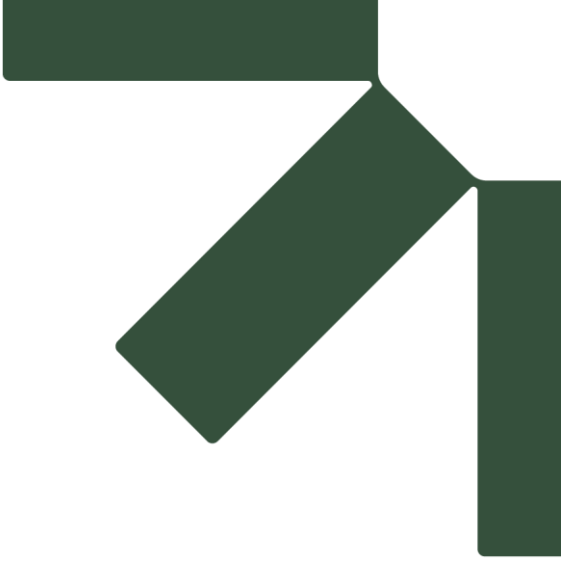


Annex A NVC Target Notes

A number of target notes were also made during surveys, these target notes are shown on **Figure 7.3** and detailed within **Table A-1** below. A representative sample of corresponding target note photographs is provided in **Annex B**.

Table A-1 Survey Area Target Notes

Target Note ID	Easting	Northing	NVC Community	Description	Photo Reference
1	248543	649852	M19	Self-seeded conifers within area of M19.	B-1
2	248419	649553	M19	Self-seeded conifers within area of M19.	
3	247402	648927	M18	<i>Andromeda polifolia</i> growing on hummocks.	B-2
4	247426	648814	M19	Deep and active artificial drain.	
5	247872	649042	M20	Self-seeded conifers in area of M20 on edge of larger expanse of M18.	B-3
6	247177	648639	M19	Self-seeded conifers in M19 ride.	
7	247306	648701	CP	Checked and poorly grown plantation on deep peat.	B-4
8	247702	649235	M18	Large open area of deep peatland at Glenouther Moor surrounded by plantation. It could be classified as a mix of M17 or M18 or an intermediate of these communities. However, on balance the vegetation and character fits better as M18 because of the abundance of <i>Vaccinium oxycoccos</i> , frequent-occasional <i>Sphagnum medium</i> and some instances of <i>Andromeda polifolia</i> . The species mix includes <i>Calluna vulgaris</i> , <i>Eriophorum angustifolium</i> , <i>E. vaginatum</i> , <i>Erica tetralix</i> , <i>Empetrum nigrum</i> , <i>Trichophorum germanicum</i> , <i>Narthecium ossifragum</i> , <i>Vaccinium myrtillus</i> , <i>Drosera rotundifolia</i> , <i>Vaccinium oxycoccos</i> and <i>Andromeda polifolia</i> . Mosses include <i>Sphagnum papillosum</i> , <i>S. medium</i> , <i>S. capillifolium</i> , <i>S. fallax</i> , <i>Aulacomnium palustre</i> , <i>Polytrichum strictum</i> , <i>Hypnum</i> sp., and occasional <i>Cladonia</i> spp. (lichens). Has a near natural surface pattern, although it lacks bog pools it has some wetter hollows, <i>Sphagnum</i> lawns and some notable sized <i>Sphagnum capillifolium</i> hummocks. In places there is some self-seeded conifer invasion around the edge. Some deer tracks and deer dung is present but grazing impact seems low.	B-5



Annex B

**Target Note
Photographs**

The following photographs correlate to the target notes described within **Annex A, Table A-1**. Photographs are not provided here for all target notes, due to the similarity in many photographs.

Photo B-1 Target Note 1 – Self-seeded conifers within forestry ride of M19 *Calluna vulgaris* – *Eriophorum vaginatum* blanket mire



Photo B-2 Target Note 3 – *Andromeda polifolia* growing on hummocks



Photo B-3 Target Note 5 – Self-seeded conifers in M20 *Eriophorum vaginatum* blanket mire at edge of larger area of M18 *Erica tetralix* – *Sphagnum papillosum* blanket mire

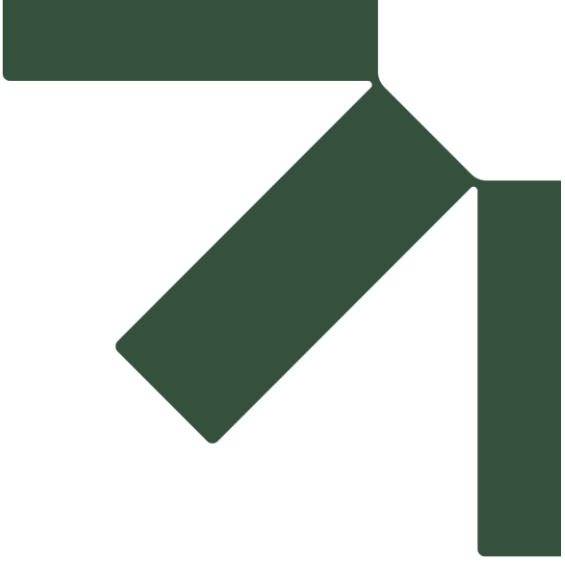


Photo B-4 Target Note 7 – Poorly-grown *Picea sitchensis* plantation on deep peat



Photo B-5 Target Note 8 – M18 *Erica tetralix* – *Sphagnum papillosum* blanket mire





Annex C

**General Community
Photographs**

The following selected photographs are provided to give a visual representation to a number of the community types and features present within the survey area.

Photo C-1 M6 *Carex echinata* - *Sphagnum fallax/denticulatum* mire, *Juncus effusus* sub-community



Photo C-2 M25a^ *Molinia caerulea* – *Potentilla erecta* mire *Erica tetralix* sub-community, on deep peat



Photo C-3 M19 *Calluna vulgaris* – *Eriophorum vaginatum* blanket mire



Photo C-4 M20 *Eriophorum vaginatum* blanket mire



Photo C-5 M23b *Juncus effusus/acutiflorus* – *Galium palustre* rush-pasture, *Juncus effusus* sub-community



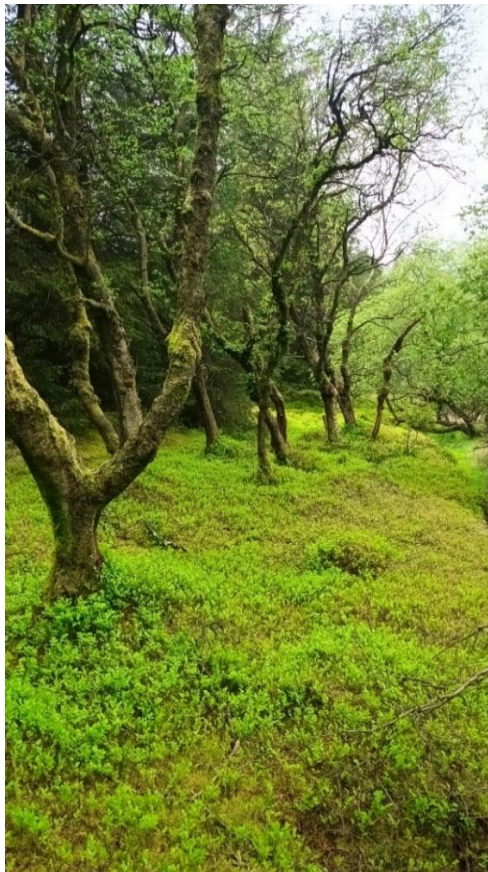
Photo C-6 M4 *Carex rostrata* - *Sphagnum fallax* mire



Photo C-7 W4 *Betula pubescens* – *Molinia caerulea* woodland



Photo C-8 W17b *Quercus petraea* – *Betula pubescens* – *Dicranum majus* woodland, typical sub-community





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