# EUCHANHEAD RENEWABLE ENERGY DEVELOPMENT

Technical Appendix 8.2: Phase 1 Habitat and NVC Survey

Prepared for: ScottishPower Renewables



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### 1.0 Introduction

SLR was commissioned by ScottishPower Renewables (SPR) in September 2019 to undertake vegetation surveys at the proposed Euchanhead Renewable Energy Development site (the Site), in Dumfries and Galloway, approximately 9.8 km south west of Sanquhar, as measured to the nearest turbine location. Surveys were carried out in October 2019 covering all land within the proposed Site boundary plus a buffer zone of 250 m, where accessible.

In June 2020, further surveys were undertaken along the proposed Access Route A, which had not yet been identified at the time of the October 2019 survey, focussing on sections of proposed new track and borrow pits. Further surveys were also undertaken on land outside the site boundary but within 250 m of proposed infrastructure, where access was not possible in 2019 but which was accessible in 2020.

Following the completion of surveys in 2020 the red-line boundary was reduced such that a large area surveyed to the south of the Polskeoch forest block is now outwith the site and 250 m buffer and a few small areas around the edge of the Euchanhead forest block that were previously outwith the red-line boundary are now within it, there is however no infrastructure near these new areas so no additional survey was undertaken to cover them.

In October 2020 an additional survey was completed where the route of the proposed Access Route A had been altered, and to the north of proposed Borrow Pit 7 to extend the survey buffer to 250 m. This was required as following the June 2020 surveys, proposed Borrow Pit 7 was moved slightly north to avoid direct impacts on an area of M10 base-rich flush vegetation, such that the survey buffer around it to the north no longer extended to 250 m.

This report presents the results of surveys in October 2019, June 2020 and October 2020 and has been used to inform plans for the proposed Development and the associated Environmental Impact Assessment (EIA).

# 1.1 Site Description

The site is split into three areas, these are the Euchanhead forest block to the north centred on NS 68275 05806, the Polskeoch forest block to the south centred on NS 69189 01615 and the Shinnelhead forest block in the south centred on NX 70149 99992 (Figure 8.2.1 and Figure 8.2.2, Appendix 01). Altitude on site ranges between 330 m and 550 m. Both areas form part of the National Forest Estate and both are largely commercial forestry, with limited open ground along tracks and watercourses. They are separated by two peaks of high open ground Ryegrain Rig (600 m) and Corse Hill (580 m). Both areas are surrounded by upland moorland vegetation. To the west of the site is Afton reservoir, watercourses in both the Euchanhead, Polskeoch and Shinnelhead forest blocks: the Euchan Water, Polskeoch Burn, Shinnel Water, and tributaries thereof, drain away from this reservoir, most toward the east joining the River Nith in or downstream of Sanquhar. The Polveddoch Burn to the west of the Polskeoch forest block drains to the south west joining the Water of Ken. A recently constructed overhead line (South West Scotland (SWS) Connections Project) passes through the Euchanhead forest block, connecting local renewable energy projects to a new substation at Glenglass, on the northeast site boundary.

Two access routes to the Site from the public highway have been identified, referred to as Access Route A and Access Route B (for further details see **EIA Report Chapter 3: Description of the proposed Development**). The proposed Access Route A enters the site to the west of the Euchanhead forest block, between Earlseat and Magheuchan Rig at c. 534 m asl. It contours along the open hill side to the southwest to the Kello Water and then turns north following contours of the hillsides to Hare Hill Windfarm (c. 550 m asl). From here on access is predominantly via the existing Hare Hill Windfarm access track, with the exception of a couple of corners that need to be altered to account for the dimensions of the proposed turbines for Euchanhead. Two borrow pits and a laydown area are proposed along the route of the proposed Access Route A. The proposed Access Route B utilises existing roads from the A76 at Sanquar to where it enters the site close to Glenglass Cottage. It is not expected to have to carry out any significant engineering works to the public highway along this route and vegetation survey was therefore not considered necessary.



# 1.2 Site History

In 2013 SPR submitted a section 36 scoping request for a windfarm development at the Euchanhead site which consisted of three separate land parcels, namely Corserig (Northern), Euchanhead (Middle) and Polskeoch (Southern). However, development activity was temporarily paused. During this process there were a number of ecology surveys undertaken to establish EIA baseline data for the site. The Corserig area has since been removed and the current development proposals cover only the Euchanhead and Polskeoch areas. The combined site continues to be promoted as Euchanhead.

#### 1.2.1 Ecology Surveys History

Vegetation surveys (Phase 1 and National Vegetation Classification (NVC)), were completed at the site in 2012<sup>1, 2</sup>. However, as the site boundary was different at the time, no vegetation data are available for most of the current site and the existing data are eight years old. The 2012 data therefore have limited value in informing the EIA for the proposed Development and the surveys covered in this report are designed to fill this information gap.



<sup>&</sup>lt;sup>1</sup> MacArthur Green Ltd. 2012. Euchanhead Windfarm: Extended Phase 1 habitat survey report.

<sup>&</sup>lt;sup>2</sup> MacArthur Green Ltd. 2012. Euchanhead Windfarm: NVC survey report.

# 2.0 Survey Methods

Vegetation surveys were undertaken for all land within the proposed Renewable Energy Development site boundary at the time of survey (note that the boundary has subsequently been amended to that illustrated on the Figures – see **Section 1**). In addition, a 250 m buffer outwith the boundary was surveyed in areas where development infrastructure may be placed close to the site boundary, and access was permitted.

Vegetation surveys were also undertaken along sections of proposed new Access Route A and related infrastructure, plus a 100 m buffer (extended to 250 m around proposed borrow pits). The existing Hare Hill access track was not surveyed as no works associated with Euchanhead Renewable Energy Development are proposed in these areas. The extent of the survey buffers was defined in line with current SEPA guidance<sup>3</sup>, which requires survey to be carried out within 250 m of development with excavations or intrusions greater than 1 m depth (e.g. turbines and borrow pits) and within 100 m of development with excavations or intrusions less than 1 m depth, such as access tracks. Survey area boundaries are shown in **Figures 8.2.1 and 8.2.2** (**Appendix 01**).

Surveys were completed between the 14<sup>th</sup> and 23<sup>rd</sup> of October 2019, the 8<sup>th</sup> and 13<sup>th</sup> of June 2020 and on the 14<sup>th</sup> of October 2020.

# 2.1 Phase 1 Habitat Survey

The Phase 1 habitat survey was undertaken to characterise, at a broad scale, the habitats present within the survey area boundaries and identify: habitats of significant conservation value; protected/notable plant species; and invasive non-native plant species. Surveyors followed the standard Phase 1 habitat survey methodology as described in the Phase 1 Habitat Survey handbook<sup>4</sup>. Target notes were taken to describe any particularly notable features. Target note locations are shown in **Figure 8.2.1 (Appendix 01)** and target note descriptions are provided in **Appendix 02**. In areas where NVC surveys were undertaken Phase 1 habitats types were identified based on a combination of the NVC and peat depth data using conversion tables in the Phase 1 handbook. A botanical species list was compiled during the course of the Phase 1 habitat survey and NVC survey and is provided in **Appendix 03**. Where peat depth can effect what Phase 1 habitat type peat depth, data either taken on the day or during peat probing surveys were used to determine the most appropriate classification.

# 2.2 National Vegetation Classification (NVC) Survey

An NVC survey was undertaken to provide more detailed information regarding potentially important seminatural vegetation on site, this is particularly important in the context of peat-forming vegetation and potential Ground Water Dependent Terrestrial Ecosystems (GWDTEs). There is a requirement under the Water Framework Directive to carry out assessment of the likely impacts of development on vegetation communities which are dependent on groundwater, in line with SEPA LUPS guidance<sup>3</sup>. The potential for groundwater dependency is initially identified via NVC survey.

Surveys were undertaken following the survey method as described in the NVC Users' Handbook<sup>5</sup>. Areas of commercial forestry plantation including narrower rides and watercourses were not included in the NVC survey as these vegetation types were considered either not to be NVC communities or to be highly modified by shading and forestry practices etc. The areas surveyed are illustrated on **Figure 8.2.2 (Appendix 01)**.

<sup>&</sup>lt;sup>5</sup> Rodwell, J. S. 2006. National Vegetation Classification: Users' handbook. JNCC, Peterborough http://data.jncc.gov.uk/data/a407ebfc-2859-49cf-9710-1bde9c8e28c7/JNCC-NVC-UsersHandbook-2006.pdf



<sup>&</sup>lt;sup>3</sup> SEPA. 2017. Land use planning system SEPA guidance note 31. Guidance on assessing the impacts of development proposals on groundwater abstractions and ground water dependent terrestrial ecosystems. Version 3, 11/09/2017.

<sup>&</sup>lt;sup>4</sup> Joint Nature Conservation Committee. 2010. Handbook for Phase 1 habitat survey: a technique for environmental audit. JNCC, Peterborough.

In general, the NVC community types present within the survey area were readily identifiable to an experienced NVC surveyor. Quadrat sampling was used to record species composition and, where considered necessary, to clarify the community present. Where quadrat sampling was used, the following methodology was adopted:

Initial sampling of vegetation was carried out as recommended in the NVC users' handbook, by sampling at random in stands of vegetation 'judged by eye to be floristically and structurally homogeneous'. Where it was difficult to establish the vegetation type, more than one sample was taken to achieve a larger data set.

The size of quadrat used was 2 x 2 m. Each quadrat position was recorded as a twelve-figure grid reference using a GPS enabled tablet or as Universal Transverse Mercator (UTM) for the GPS unit used. Within each quadrat, all vascular plants and bryophytes of frequent occurrence (and some less frequent but readily recognisable) were identified and an estimate of cover value of each made, using the DOMIN scale of cover as shown below:

#### DOMIN scale

- 10 91-100%
- 9 76–90%
- 8 51–75%
- 7 34-50%
- 6 26–33%
- 5 11–25%
- 4 4-10%
- 3 Many individuals
- 2 Several individuals
- 1 Few individuals

Due to the topography of the land in some parts of the survey area, some polygons represent complex mosaics of different NVC communities and are therefore best regarded as mosaics. Mosaics are mapped as the dominant community in **Figure 8.2.2 (Appendix 01)** with their percentage composition noted in text. Quadrat data can be found in **Appendix 02**. As the main purpose of the NVC survey was to allow identification of potential GWDTE and priority habitat types, mapping was conducted to community level only, although where identification to sub-community level was possible this is noted in the text.

Target notes were taken on any features too small to map or of particular relevance to interpreting the vegetation communities present (Figure 8.2.2, Appendix 02). There was some variation among surveyors in the extent to which target notes were utilised and target notes were of particular importance along the proposed Access Route A due to the higher frequency than elsewhere on site of small flushes and springs.

#### 2.2.1 Reporting

This report has been compiled so that the Phase 1 habitat categories are included alongside the corresponding NVC community types; that is, NVC community types have been grouped under the Phase 1 habitat type that they most closely represent. **Figure 8.2.2 (Appendix 01)** illustrates the NVC communities present and quadrat locations.

Current SEPA guidance<sup>3</sup> provides a table showing which NVC communities indicate that a wetland is likely to be either highly or moderately groundwater dependent, depending on the hydrogeological setting. The evaluations of likely groundwater dependency, based on SEPA guidance, are summarised in **Table 3-1** and shown in **Figure 8.2.3** (Appendix 01).



#### 2.3 Nomenclature

Botanical nomenclature in this report follows that of Stace  $(2010^6)$  for vascular plants and Atherton *et al.*  $(2010^7)$  for bryophytes. For clarity, due to the use of different English names for some plant species, only scientific (Latin) names have been used within the main body of the report. For ease of reference English names are provided in the plant species list in **Appendix 03**.

## 2.4 Survey Personnel

Within the site boundary, with the exception of the area around Meikledodd Hill and Lorg Hill, Dr Ida Bailey ACIEEM, Associate Ecologist, undertook the Phase 1 surveys, and Nicola Faulks CEcol MCIEEM, Principal Ecologist, supported by Ida, undertook the NVC surveys in October 2019. Both Ida and Nicola are employees of SLR. Nicola also undertook the NVC survey around the amended section of the proposed Access Route A and Borrow Pit 7, in October 2020.

- Dr Bailey has worked in ecological consultancy for four years; she has distinction in field botany for the Royal Botanical Gardens Edinburgh (Certificate) and has carried out Phase 1 surveys at several sites in Scotland.
- Nicola is an ecologist with more than 13 years' professional botanical experience who has completed NVC surveys on a number of upland windfarm sites in Scotland.

The area around Meikledodd Hill and Lorg Hill, including the only accessible part of the 250 m site buffer, was surveyed by Matt Clifford and Sarah Birtley from Bowland Ecology, on behalf of SLR, also in October 2019.

- Sarah has worked in ecological consultancy for six years, undertaking Phase 1 Habitat Survey for a wide range of small and large-scale projects and has carried out upland NVC in Scotland, mostly for windfarm projects.
- Matt has worked in ecological consultancy for six years, undertaking extensive Phase 1 habitat and indepth botanical surveys in a wide range of habitats throughout the UK including NVC surveys in upland areas within Wales and Derbyshire.

The areas surveyed in June 2020, including additional areas of the site buffer zone and along the proposed Access Route A, were surveyed by Chris Roger from Tringa Ecology, on behalf of SLR.

• Chris is a highly experienced consultant ecologist with over 20 years' experience working in the ecological sector. Chris has undertaken NVC and Phase 1 surveys at multiple windfarm sites across Scotland.

#### 2.5 Limitations

The time of year in which the 2019 surveys and October 2020 survey were undertaken was considered to be relatively late in the season for vegetation surveys. However, given the upland moorland species present the season was still suitable for undertaking Phase 1 and NVC surveys as most species were still readily identifiable. It should however be noted that such surveys are only a snapshot and cannot preclude other species being more easily detectable at other times of year. This is not considered to be a serious limitation due to the experience of the botanical surveyors and the types of vegetation being surveyed.

There was no frost or snow cover at the time of survey, and therefore all vegetation types were clearly visible.

<sup>&</sup>lt;sup>7</sup> Atherton,I., Bosanquet, S. & Lawley, M. 2010 *Mosses and Liverworts of Britain and Ireland: A Field Guide.* British Byrological Society.



<sup>&</sup>lt;sup>6</sup> Stace, C. 2010 New Flora of the British Isles. 3<sup>rd</sup> Edition. Cambridge University Press.

Survey was not undertaken for the gardens of a residential property at Polskeoch, and the Polskeoch Bothy which are located within the 250 m survey buffer, although where practical these areas were surveyed visually from the property boundaries. This is also not considered to be a significant limitation to the findings of this report given the habitats present.



# 3.0 Results

A list of NVC community codes and names can be found in **Table 3-1**. For brevity only NVC codes are referred to within the text.

#### 3.1 Overview of Habitats

#### 3.1.1 Proposed Renewable Energy Development Site

The majority of the Site is coniferous plantation, typically *Picea sitchensis* including significant areas of recently felled coniferous plantation. Felled areas in the Euchanhead forest block are largely along the route of the South West Scotland Interconnector overhead line route, which runs through the centre of the site parallel with the Euchan Water (Photo 3-1). Felling here took place in 2016 and 2017, there is therefore two to three years of vegetation regrowth among the brash and stumps, this is largely grasses and rushes with some areas of bog, heath, *Picea sitchensis* regeneration, and seedling stage broad-leaved woodland starting to develop, however these young vegetation communities were not well established and may be transitional. Therefore, they were mapped as recently felled woodland.



Photo 3-1: Recently felled woodland along the interconnector route

There are three larger open areas within the forestry. These are in the Polskeoch forest block:



- one is on the summit of Carnine Hill (557 m asl), here there is some remnant blanket bog (M19) with bog pools on the higher ground surrounded largely by modified bog (M20) and heath (H18) on the lower slopes.
- the second is in the low-lying section of the Polskeoch Burn valley. Here there is a valley mire (M25) on peat over 1 m deep showing signs of modification from draining. This is surrounded by areas of marshy grassland / modified bog, neutral grasslands (MG9), and marshy grassland (M23, MG10). There are also a few patches of semi-mature broad-leaved plantation in this area including *Sorbus aucuparia*, *Betula* sp. and non-native species such as *Quercus rubra*, *Malus hupehensis*, and *Acer platanoides*. In addition, there are some small patches of recent broad-leaved planting where saplings have not yet emerged from their tree tubes.
- the third is around Shinnelhead in the Shinnel Water valley (Photo 3-2, C). This area is adjacent to a farm and the fields closest to this are semi-improved and neutral grassland (e.g. MG9). Moving up slope in this area habitats are typically acid grassland and *Pteridium aquilinum* (U4 and U20) and marshy (MG10 and M23) grassland. Along the valley bottom to the east are areas of riverine broad-leaved woodland, marshy grassland and small remnant patches of bog.

There are six larger open areas around the boundaries of the proposed Site (within the site boundary and within the accessible area of the 100 / 250 m buffer), including:

- the slopes to the south of Ox Hill, 505 m asl (Photo 3-2, B). The higher ground here has some remnant heath and bog (M20) communities with lower slope being dominated by acid (U4 and U20) and marshy grassland (M25).
- the slopes north of Lamgarroch Hill, 573 m asl and Colt Hill 598 m asl, (Photo 3-2, A). Here there are a
  mix of bog (M17 and M20), heath (H18) and acid grassland (U6, U5 and U4) communities, with smaller
  areas of rush pasture (M23), marshy grassland (M25) and scarce bog pools. There are number of drainage
  channels in this area that have resulted in the drying of surrounding habitats.
- slopes to the east of Lorg Hill, 590 m asl and Meikledodd Hill, c. 630 m asl. These are dominated by acid grassland (U4, U5 and U6) and modified bog (M20 and M25); with significant areas of marshy grassland (M23 and M25). There are smaller pockets of better-quality bog (M19 and M17) and flushes (M6) often in mosaic with grassland and more modified bog habitats. Where these mosaics occur, the dominant habitat is illustrated on the Phase 1 map (Figure 8.2.1, Appendix 01), with additional detail provided in the NVC map (Figure 8.2.2, Appendix 01). In addition, there are occasional areas of wet heath (M15).
- an area of bog (M19) west of Herd Naze.
- hillside north of Well Hill Quarry, c. 530 m asl. This area is dominated by acid grassland U4, and modified bog M20, with small areas of dry heath H18.
- land between the Euchanhead and Polskeoch forest blocks, 530 m to 600 m asl. This area is dominated by acid grassland U5, and modified bog M20.



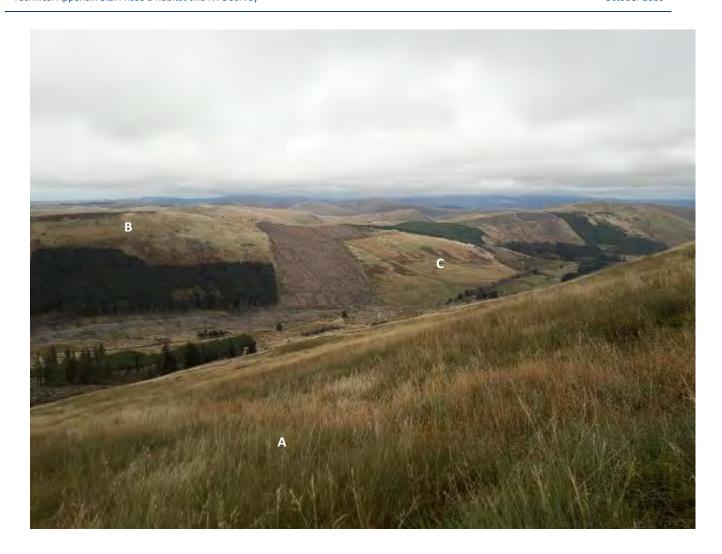


Photo 3-2: Slopes of Lamgarroch Hill (A: foreground) looking north to the open area on Ox Hill (B: top left) and the open area near Shinnelhead (C: centre right).

Aerial imagery indicates that the open habitats surrounding the site outwith the survey area are broadly similar to these open areas.

#### 3.1.2 Proposed Access Route A

Only areas of the proposed Access Route A where new track or upgrades to existing tracks are proposed were surveyed. These areas predominately lie between Harehill Windfarm and the Euchanhead forest block. The habitat here is high (typically above 550 m asl) open moorland and passes through the Afton Uplands Provisional Local Wildlife Site for much of its length.

The route contours the landscape and passes close to the sources of burns feeding into the Kello Water. This area is relatively rich in flushes and springs compared to much of the rest of the site with water visibly rising from the ground in places. The occurrence of base-rich communities such as M10 and CG10 and M32 in an otherwise peat rich/ acidic habitat mosaic indicates that there may be a groundwater influence in these springs/ flushes.

Open habitats are otherwise similar to those found around the rest of the site with a mix of acid grassland, modified bog, marshy grassland, heath and blanket bog.



# 3.2 Summary of Phase 1 Habitat Types and NVC Communities

**Table 3-1** lists all Phase 1 habitat types and NVC communities recorded within the survey area boundary. **Section 3.3** goes on to provide more detail on the composition and location of each NVC community type, grouped by Phase 1 habitat category. Each NVC community is only described once, under the Phase 1 habitat type in which it is most frequently found, although in some cases NVC communities occur across more than one Phase 1 habitat type. The Phase 1 habitat map is provided on **Figure 8.2.1 (Appendix 01)**. Target notes are shown on the Phase 1 map and NVC maps as appropriate, with target note descriptions provided in **Appendix 02**. The NVC map is provided in **Figure 8.2.2 (Appendix 01)**. The quadrat locations are also shown on the NVC map and details are provided in **Appendix 02**.

A number of heath and bog habitats are listed on Annex 1 of the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora)<sup>8</sup>. The habitats listed in Annex 1 of the Directive are natural habitat types whose conservation requires the designation of Special Areas of Conservation and are generally regarded as being of European importance. Those communities representing Annex 1 habitats are indicated in **Table 3-1**. With regard to peatland habitats which have been more heavily modified, e.g. some of the areas mapped as M15, M17, M20 and M25, a precautionary approach has been taken and these have been included in the table as Annex 1 habitats. Three of the community types identified represent Annex 1 habitats. The Scottish Biodiversity List<sup>9</sup> (SBL) is a list of animals, plants and habitats which Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. The purpose of the list is to identify species and habitats which are the highest priority for conservation in Scotland. Habitats listed on the SBL are also highlighted in **Table 3-1**.

Some habitats are additionally listed on the Dumfries and Galloway Local Biodiversity Action Plan (LBAP), which states that there should be no net loss of these habitats<sup>10</sup>.

The potential for NVC communities to be GWDTE has been assessed based on SEPA guidance<sup>3</sup> (**Table 3-1**). The actual ground water dependency of these areas has been established during the EIA relative to the hydrogeomorphology of the site and is reported separately within the EIA report. The NVC communities CG10, M6, M10, M31, M32 and M23 have high potential to be dependent on groundwater and five communities, M15, M25, MG9, MG10 and U6 have moderate potential. Their locations are shown on **Figure 8.2.3 (Appendix 01)**. For mosaic habitats, a precautionary approach has been adopted whereby GWDTE potential has been based on the NVC community with the highest GWDTE potential within the mosaic. The remainder of the NVC communities recorded are classified by SEPA as having low or no groundwater dependence.

Table 3-1: Phase 1 Habitats (in bold) and NVC communities recorded within the Survey Area (GWDTE potential is indicated as: High or Moderate, where applicable)

Community or Habitat Code	Community or Habitat Name	Conservation Status	Area (Ha) <sup>11</sup>
A1.1.1	Broadleaved woodland semi-natural	LBAP (birch ash and oak woods only)	1.69

<sup>8</sup> https://www.nature.scot/snh-commissioned-report-766-manual-terrestrial-eunis-habitats-scotland

<sup>&</sup>lt;sup>11</sup> Where two area figures are provided for NVC communities, the first figure refers to the area of that community within the relevant Phase 1 habitat type (the NVC communities listed under each Phase 1 habitat type only include those that are principally associated NVC communities - see Appendix 8 of the Phase 1 handbook). The second figure (following the '/') represents the area of each NVC community within the survey area as a whole, including contributions to mosaics, e.g. (3 ha in relevant Phase 1 community/ 5 ha within the survey area as a whole).



<sup>&</sup>lt;sup>9</sup> SBL (2013) Scottish Biodiversity List [online] Available at: <a href="http://www.biodiversityscotland.gov.uk">http://www.biodiversityscotland.gov.uk</a> [Accessed 15 December 2015]

<sup>10</sup> http://www.sup.org.uk/PDF/DG-LBAP(2009).pdf

Community or Habitat Code	Community or Habitat Name	Conservation Status	Area (Ha) <sup>11</sup>
A1.1.2	Broadleaved woodland plantation		7.32
A1.2.2	Coniferous Woodland Plantation (including newly planted Coniferous Woodland Plantation)		1,489.10
A3	Parkland and scattered trees		29.41***
A4.2	Recently-felled Coniferous Woodland		515.75
B1.1	Unimproved Acid Grassland	LBAP	266.05
U2	Deschampsia flexuosa grassland	Not Annex 1	0.99 / 1.31
U4	Festuca ovina-Agrostis capillaris- Galium saxatile grassland community	Not Annex 1 except where species rich U4c (no U4c was recorded)	80.02/86.28
U5	Nardus stricta-Galium saxatile grassland	SBL, Not Annex 1 except where species rich U5c (U5c was recorded near flushed areas)	105.80/ 124.77
U6	Juncus squarrosus-Festuca ovina grassland community	SBL, Not Annex 1.	55.70/ 62.56
B2.2	Neutral Grassland – Semi-improved		14.02
MG9	Holcus lanatus – Deschampsia cespitosa grassland	Not Annex 1.	7.75/ 9.39
MG10	Holcus lanatus-Juncus effusus rush pasture community	SBL, Not Annex 1.	4.53/ 6.03
B3.1	Calcareous grassland-unimproved	LBAP	0.47
CG10	Festuca ovina-Agrostis capillaris- Thymus polytrichus grassland	SBL, Annex 1: H6230 Species-rich Nardus grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe)*	NA/ 0.03 (all in mosaics)
U5c	Nardus stricta-Galium saxatile grassland:	SBL, Annex 1: H6230 Species-rich Nardus grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe)*	NA/0.44
B4	Improved grassland	None	1.44
B5	Marsh/Marshy Grassland	LBAP	96.55
M23	Juncus effusus/Juncus acutiflorus- Galium palustre rush pasture community	SBL, Not Annex 1.	35.45/ 36.49
M25*	Molinia caerulea-Potentilla erecta mire community	Only SBL or Annex 1 where associated with blanket bog (peat >0.5 m).	34.28/ 42.98



Community or Habitat Code	Community or Habitat Name	Conservation Status	Area (Ha) <sup>11</sup>
C1.1	Tall Herb and Fern Continuous – Bracken		14.29
U20	Pteridium aquilium-Galium saxatile community	Not Annex 1.	14.19/ 16.04
C3.1	Other tall herb and fern- tall ruderal		0.51
D1.1	Dry dwarf shrub heath	LBAP	12.05
H12	Calluna vulgaris-Vaccinium myrtillus heath	SBL & Annex 1: H4030, European dry heath (most non-montane stands)	1.18/ 4.43
H18	Vaccinium myrtillus-Deschampsia flexuosa heath	SBL & Annex 1: H4030, European dry heath (most non-montane stands)	7.81/ 29.71
H21	Calluna vulgaris-Vaccinium myrtillus– Sphagnum capillifolium heath	SBL & Annex 1: H4030, European dry heath (most non-montane stands)	0.61/ 0.74
D2	Wet dwarf shrub heath	LBAP	15.26
M15*	Scirpus cespitosus-Erica tetralix wet heath community	SBL & Annex 1: H4010 — Northern Atlantic wet heaths with <i>Erica tetralix, wet heath stands</i> (<0.5 m peat, majority of stands) or Annex 1 H7130 — Blanket Bog where associated with blanket bog (peat >0.5 m).	9.45/ 34.05
D5	Dry heath/ acid grassland	See constituent habitats	42.68
H12	Calluna vulgaris-Vaccinium myrtillus heath	SBL & Annex 1: H4030, European dry heath (most non-montane stands)	1.22/ 4.43
H18	Vaccinium myrtillus-Deschampsia flexuosa heath	SBL & Annex 1: H4030, European dry heath (most non-montane stands)	15.39/ 29.71
U2	Deschampsia flexuosa grassland	Not Annex 1	0.32/ 1.31
U4	Festuca ovina-Agrostis capillaris- Galium saxatile grassland community	Not Annex 1 except where species rich U4c (no U4c was recorded)	4.44/ 86.28
U5	Nardus stricta-Galium saxatile grassland	SBL, Not Annex 1 except where species rich U5c (U5c was recorded near flushed areas)	14.09/ 124.77
U6	Juncus squarrosus-Festuca ovina grassland community	SBL, Not Annex 1.	0.92/ 62.56
D6	Wet heath/ acid grassland	See constituent habitats	10.00
M15*	Scirpus cespitosus-Erica tetralix wet heath community	SBL & Annex 1: H4010 — Northern Atlantic wet heaths with <i>Erica</i> tetralix, wet heath stands (<0.5 m peat, majority of stands)	3.05/ 34.05



Community	Community or Habitat Name	Conservation Status	Area (Ha) <sup>11</sup>
or Habitat Code			
U5	Nardus stricta-Galium saxatile grassland	SBL, Not Annex 1 except where species rich U5c (U5c was recorded near flushed areas)	1.81/ 124.77
U6	Juncus squarrosus-Festuca ovina grassland community	SBL, Not Annex 1.	3.57/ 62.56
E1.6.1	Blanket Bog	LBAP	116.33
M3	<i>Eriophorum angustifolium</i> bog pool community	SBL & Annex 1: H7130 – Blanket Bog	0.41/ 0.71
M15*	Scirpus cespitosus-Erica tetralix wet heath community	SBL & Annex 1 H7130 – Blanket Bog where associated with blanket bog (peat >0.5 m).	5.04/ 34.05
M17	Scirpus cespitosus–Eriophorum vaginatum blanket mire community	SBL & Annex 1: H7130 – Blanket Bog	16.69/ 21.25
M18	Erica tetralix–Sphagnum papillosum raised and blanked mire	LBAP, SBL & Annex 1: H7130 – Blanket Bog (all stands on blanket bog)	0.81/0.81
M19	Calluna vulgaris – Eriophorum vaginatum blanket mire	SBL & Annex 1: H7130 – Blanket Bog	37.53/ 46.25
M20	Eriophorum vaginatum blanket & raised mire	Only SBL or Annex 1 where associated with blanket bog.	52.54/ 94.88
E1.7	Wet Modified Bog		33.45
M3	<i>Eriophorum angustifolium</i> bog pool community	SBL & Annex 1: H7130 – Blanket Bog	0.21/ 0.71
M15*	Scirpus cespitosus-Erica tetralix wet heath community	SBL & Annex 1: H4010 — Northern Atlantic wet heaths with <i>Erica tetralix, wet heath stands (&lt;0.5 m peat, majority of stands) or</i> Annex 1 H7130 — Blanket Bog where associated with blanket bog (peat >0.5 m).	5.37/ 34.05
M20	<i>Eriophorum vaginatum</i> blanket & raised mire	Only SBL or Annex 1 where associated with blanket bog.	15.14/ 94.88
M25*	<i>Molinia caerulea-Potentilla erecta</i> mire community	Only SBL or Annex 1 where associated with blanket bog (peat >0.5 m).	7.12/ 42.98
M17**	Scirpus cespitosus – Eriophorum vaginatum blanket mire community	LBAP, SBL & Annex 1: H7130 – Blanket Bog (all stands)	1.74/ 21.25
E1.8	Dry modified bog		31.19



Community or Habitat Code	Community or Habitat Name	Conservation Status	Area (Ha) <sup>11</sup>
M19**	Calluna vulgaris – Eriophorum vaginatum blanket mire	Only SBL or Annex 1 where associated with blanket bog.	2.37/ 46.25
M20**	<i>Eriophorum vaginatum</i> blanket & raised mire	Only SBL or Annex 1 where associated with blanket bog.	21.32/ 94.88
E2.1	Flushes and springs - Acid/ neutral flush	LBAP	3.33
M6	Carex echinata-Sphagnum fallax/denticulatum mire	SBL, Not Annex 1.	2.42/ 7.21
E2.2	Flushes and springs - Basic flush	LBAP	0.05
M10	Carex dioica – Pinguicula vulgaris mire	SBL, Annex 1: H7230 Alkaline fens	0.05/ 0.26
E2.3	Flushes and springs - Acid/ neutral flush- bryophyte dominated spring	LBAP	0.70
M31	Anthelia julacea – Sphagnum denticulatum spring	SBL, Not Annex 1	<0.01
M32	Philonotis fontana – Saxifraga stellaris spring	SBL, Not Annex 1	0.70/0.74
G1	Standing water	SBL	0.06
I2.1	Quarry	None	3.79
J3.6	Buildings	None	0.50
J3.7	Track	None	14.65
J4	Bare ground	None	2.52
Total			2,765.25

<sup>\*</sup> M25 can be associated with the Phase 1 habitats marshy grassland or wet modified bog depending on peat depth. Peat is believed to be shallow <0.5 m over most of the site based on the Scottish soils map<sup>12</sup>, M25 has been assigned to marshy grassland under the Phase 1 classification over most of the site except where peat probing during the Phase 1 survey indicated that it is modified bog (i.e. located on peat >0.5 m deep). Whilst these classifications are considered likely to be correct across much of the site, peat depth data is interpolated and it is possible that some areas would be reclassified based on more detailed peat depth information.

12 http://map.environment.gov.scot/Soil\_maps/?layer=10



<sup>\*\*</sup> Some bog communities have been classed as blanket bog, wet-modified bog and dry-modified bog depending on ground/ habitat conditions. To avoid unnecessary repetition, these NVC communities are only described under one of the corresponding Phase 1 sub-headings below with notes indicating why this is considered the most appropriate category for the majority of that community and which other Phase 1 habitats some polygons of the community have been assigned to (where appropriate). In addition, it is made clear via the Phase 1 mapping which category each polygon of these habitats was assigned to during the survey.

<sup>\*\*\*</sup> Note that the area of scattered trees overlies areas of other habitats and therefore is additional to the total area of survey area.

# 3.3 Habitat and Community Descriptions

#### 3.3.1 A1.1.1/ A3 Broadleaved Woodland/ Scattered Trees Semi-natural

Broadleaved woodland and scattered trees were common along more open riverine corridors. In addition, there was a slightly larger area of woodland to the east of the Polskeoch forest block. Tree species included *Salix cinerea*, *Betula spp* and *Sorbus aucuparia*.

#### 3.3.2 A1.1.2 Broadleaved Woodland Plantation

There were several categories of broadleaved plantation, the first was mixed broad leaves still in their tubes, these were typically in recently clear-felled areas close to watercourses. The second comprised slightly older trees up to c. 5 m tall in a similar setting to the trees in tubes. Older semi-mature broadleaved plantation was recorded near the dwellings east of Polskeoch. Broadleaved planting contained a mix of native and non-native species. Native species included: *Betula spp, Scrobus aucuparia, Salix cinerea, Alnus glutinosa* and *Crataegus monogyna*. Non-native species included: *Sorbus hupehensis, Malus hupehensis, Quercus rubra and Acer platanoides*.

# 3.3.3 A1.2.2 Coniferous Woodland Plantation (including newly planted Coniferous Woodland Plantation)

The areas marked as plantation supported dense coniferous plantation (*Picea sitchensis*) of variable age typically with an absence of ground flora except in vegetated forest rides. This included areas of newly planted coniferous plantation, generally in areas of previously cleared coniferous plantation.

In places on the edge of the plantation scattered broadleaved trees such as Sorbus aucuparia were present.

#### 3.3.4 A4.2 Recently-felled Coniferous Woodland

Felled areas of a range of ages were present, from recent felling with mostly bare ground among stumps to felling undertaken two to three years ago with significant vegetation growth among the brash and stumps. Vegetation re-growth was largely grasses with some areas of marshy grassland, heath, *Picea sitchensis* regeneration, seedling stage broad-leaved woodland and bog starting to develop. However, these young vegetation communities were not well established and may be transitional, so they were mapped as recently felled woodland. Where *Larix* sp. has been felled, presumably due to *Phytophtora ramorum* infection, whole trees have been left lying on the ground.

#### 3.3.5 B1.1 /B1.2 Unimproved / Semi-improved Acid Grassland

#### U2 Deschampsia flexuosa Grassland

U2 grassland was restricted to a small area near the summit of Lamgarroch Hill and along the proposed Access Route A, to the east of Hare Hill Windfarm. U2 is very similar to H18 however *Deschampsia flexuosa* is dominant rather than subordinate to the dwarf shrubs. It may have replaced blanket bog vegetation where the peat has dried out as a result of drainage and, on Lamgorroch Hill historic small-scale mining activity in this area.

#### U4 Festuca ovina-Agrostis capillaris-Galium saxatile Grassland Community

The U4 grassland community was typically a component of most of the open areas, both on the open hill, along the proposed Access Route A and in some of the larger rides/ watercourse buffers within the forestry. The patchy U4 grasslands were dominated by grasses such as *Agrostis spp, Deschampsia flexuosa* and *Festuca ovina*. The herb content was quite varied with frequent *Potentilla erecta* and *Galium saxatile* common.



#### U5 Nardus stricta- Gallium saxatile Grassland

U5 grassland was a minor component of most of the open hillside areas. *Nardus stricta* was dominant with frequent *Agrostis capillaris* and *Festuca ovina*, *Potentilla erecta*, *Galium saxatile*, *Pleurozium schreberi*, *Rhytidiadelphus loreus and Hylocomium splendens*. It may represent the natural vegetation community in some places whereas in others it has likely replaced original mire vegetation that has been lost due to heavy grazing or drainage. U5 was found in the more species-rich subcommunity U5c along the proposed Access Route A near to springs and flushes, see calcareous grassland for Photo of U5c (Photo 3-5).

#### U6 Juncus squarrosus-Festuca ovina Grassland Community

This community was identified in the open hillside areas particularly on slopes along the proposed Access Route A, the ridge between North of Lamgarroch Hill and Colt Hill (Photo 3-3), and to the east of Lorg Hill and Meikledodd Hill. The community which is the best fit here is the U6c Vaccinium myrtillus sub-community, this is due to the abundance of mosses such as Rhytidiadelphus loreus, Polytrichum commune, Hylocomium splendens and Pleurozium schreberi that were present. Sprigs of Vaccinium myrtillus poked out of the top of these. Old flowers of Deschampsia flexuosa and Agrostis vinealis, and leaves of Anthoxanthum odoratum, gave this community a significant grassy component.



Photo 3-3: U6 showing the dark green/brown leaves of Juncus squarrosus

#### 3.3.6 B2.2 Neutral Grassland - Semi-improved

#### MG9 Holcus lanatus - Deschampsia cespitosa Grassland

This community was present close to agricultural land both at Shinnelhead and Polskeoch, both locations have small crofter's cottages/farmsteads that, over many years, have likely contributed to the nutrient enrichment of adjacent areas likely through grazing of livestock and potentially also the application of fertilisers. *Deschampsia cespitosa* was dominant in this community. It was found in association with communities MG10 and M23.

#### MG10 Holcus lanatus-Juncus effusus Rush Pasture Community

This community was present close to agricultural land both at Shinnelhead and Polskeoch, both locations have small crofter's cottages/farmsteads that, over many years, have likely contributed to the nutrient enrichment of adjacent areas likely through grazing of livestock and potentially also the application of fertilisers. The MG10 areas adjacent to the crofts were more mesotrophic in nature than the wider area, with species such as *Juncus effusus*, *Holcus lanatus*, *Poa trivialis* and *Ranunculus repens*. MG10 was present in damp areas often intergrading with slightly wetter M23 and slightly drier MG9.

#### 3.3.7 B3.1 Calcareous grassland-unimproved

#### CG10 Festuca ovina/ Agrostis capillaris/ Thymus polytrichus grassland

CG10a was found in mosaic with acid grassland (U4a) in one area along the proposed Access Route A where it contributed 10 % of the ground cover (Photo 3-4). CG10 is typically a species-rich community, at Euchanhead it was dominated by *Festuca ovina, Agrostis capillaris, Thymus polytrichus, Arrhenatherum elatius, Pilosella officinarum* and *Hylocomium splendens*. U5c was also found in this area (Photo 3-5).





Photo 3-4: CG10, along proposed Access Route A





Photo 3-5: U5c, along proposed Access Route A

#### 3.3.8 B4 Improved grassland

Where agricultural inputs had been particularly high e.g. near farm buildings, small areas of grassland had transitioned to improved grassland with a high percentage of nutrient rich indicator species such as *Lolium perenne*, *Ranunuclus spp* and *Rumex spp*.

#### 3.3.9 B5 Marsh/ Marshy grassland

#### M23 Juncus effusus/Juncus acutiflorus-Galium palustre Rush Pasture Community

This community was typically associated with watercourses and flushes and/or the transitional margin between the plantation woodland and the heath/mire/ grasslands of the open hillsides. M23 was also present in some of the wider rides of the plantation woodland which still support some of their original species (Photo 3-6).

This community was found on the steeper, wetter slopes, often adjacent to watercourses. Dominated by both *Juncus effusus* and/or *J. acutiflorus*, some areas were relatively species-rich, with *Ranunculus repens, Succisa pratensis, Viola palustris, Cardamine pratensis* and *Angelica sylvestris* being recorded. Other areas were relatively species-poor, with large amounts of *Holcus lanatus* and *Holcus mollis* growing between the *Juncus acutiflorus* stems.



Both M23 sub-communities are represented within the survey area. The M23a *Juncus acutiflorus* sub-community, which is the richer form, has a range of species including *Succisa pratensis* and *Angelica sylvestris;* and M23b the *Juncus effusus* sub-community, where fewer forbs were present.



Photo 3-6: M23/ M25 marshy grassland habitat along a watercourse

#### M25 Molinia caerulea-Potentilla erecta Mire Community

This community has been able to develop where heavy grazing and/or extensive drainage has modified the habitats by reducing the water table level on what was once likely to have been M17 or M19 mire. *Molinia caerulea* is the most abundant species with the general flora associated with this community being species-poor. Other species commonly found include *Juncus acutiflorus*, *Angelica sylvatica*, *Cirsium palustre*, *Polytrichum commune*, *Sphagnum fallax*, *Sphagnum capillifolium*, *Sphagnum fimbriatum* and *Deschampsia cespitosa*.

M25 was common on open hill sides, and along watercourses and rides within the commercial forestry, where it is typically interspersed with areas of M23. In these areas M25 has typically been classed as marshy grassland.

The most extensive tract of this community type has been assigned to an area of relatively deep peat (generally greater than 1 m) in the bottom of the Polskeoch Burn valley (Photo 3-7). There are a number of drainage ditches in this area indicating that the water table in this area has been artificially lowered and that it may once have been a more species-rich mire type such as M17. The presence of *Angelica sylvestris* in this area indicates that it



is slightly nutrient-enriched, likely from inputs from surrounding forestry. In this location M25 is classed as wet modified bog.



Photo 3-7: M25 valley mire in the bottom of the Polskeoch Burn valley

#### 3.3.10 C1.2 Tall Herb and Fern Continuous – Bracken

#### U20 Pteridium aquilium-Galium saxatile Community

This greatest extent of this community is was on the lower slopes of the open hill south of Ox Hill in the west of the survey area, which has been historically farmed. Where the *Pteridium* does not grow, the community was generally assessed to be U4 grassland, but where there is dense cover of bracken for most of the summer, the community is classified as U20. U20 also occurred in small stands within forest rides/ watercourse buffers and in other open hill side areas.

#### 3.3.11 C3.1 Other tall herb and fern-tall ruderal

An area of tall ruderal weeds was recorded near the Glenglass substation, likely as a result of ground disturbance during the construction of the substation and overhead line. Species included: *Chamaenerion angustifolium, Cirsium arvense, Rumex obtusifolius and Urtica dioica*.



#### 3.3.12 D1.1 Dry dwarf shrub heath

#### H12 Calluna vulgaris -Vaccinium myrtillus heath

H12 occurred in small areas along the proposed Access Route A, particularly between Blackcraig Hill and Quintin Knowe. The floral composition of these areas varied from nearly pure *Calluna vulgaris* to the *Vaccinium vitisidaea-Cladonia portentosa* sub-community H12b and the *Galium saxatile-Festuca ovina* sub-community H12c. *Nardus stricta* was common in H12c stands.

#### H18 Vaccinium myrtillus-Deschampsia flexuosa heath

H18 occurred along the proposed Access Route A, on the mid to upper slopes of Carnine Hill (Photo 3-8), and Lamgarroch Hill. This community had a deep moss layer including *Pleurozium schreberi, Hylocomium splendens and Rhytidiadelphus loreus* in combination with frequent *Vaccinium myrtillus*, *Deschampsia flexuosa* and *Galium saxatile*. At Euchanhead, this community is likely a derivative of *Calluna-Vaccinium* heath H12 following the removal of *Calluna vulgaris* via grazing.

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

H21 occurs mainly in several patches just to the east of Hare Hill Windfarm. It appears to derive from the drying out of M19 bog habitat. Here *Calluna vulgaris* is dominant, *E.vaginatum* is absent but *Sphagnum capillofolium* is still abundant.

#### 3.3.13 D2 Wet dwarf shrub heath

#### M15 Scirpus cespitosus (Trichophorum germanicum)-Erica tetralix Wet Heath Community

M15 wet heath was restricted to patches along the proposed Access Route A, a small area north east of Meikledodd Hill, both as a distinct habitat patch and in mosaic with acid grassland (U4 and U5); and a larger area northeast of Altry Hill. The community was typically dominated by *T. germanicum*, with *Nardus stricta* and *Vaccinium myrtillus* common in the sward. *Erica tetralix* was absent from areas around the main site indicating that the M15 is modified in this area, likely by drainage, as it prefers wetter ground.

Along the proposed Access Route A, *Erica tetralix* was present in most examples of the typical community M15b and all areas of M15c, the *Cladonia spp* sub-community. Much of the wet heath was in very grassy M15d, the *Vaccinium myrtillus* sub-community: a grassy sward with much *Trichophorum*, this generally lacked *Erica tetralix* so would not qualify as Annex I priority habitat.





Photo 3-8: H18 heath on Carnine Hill

#### 3.3.14 E1.6.1 Blanket bog

#### M3 Eriophorum angustifolium bog pool community

M3 occurred as bog pools within an area of M19 bog to the east of Meikledodd Hill and in a small area along the proposed Access Route A where it was surrounded by M17. It is typical of wet, exposed, acid peat areas such as those found within areas of M19/ M17 at these locations. M3 vegetation was strongly dominated by *Eriophorum angustifolium*. At Meikledodd Hill it was otherwise species poor. However, along the proposed Access Route A the M3 was a more Sphagnum-rich example and contained significant *Narthecium ossifragum*.

#### M18 Erica tetralix-Sphagnum papillosum raised and blanket mire

M18 occurs on a relatively relatively flat area of erosion channel between Quintin Knowe and Laglass Hill on the proposed Access Route A (Photo 3-9). This is an area of blanket bog/ saturated peat and there are extensive sheets of *Sphagnum papillosum* and less-so, *Sphagnum magellanicum*. The community is not typical M18 (see Quadrat H4, **Appendix 02**). Dwarf shrubs and graminoids are less frequent than is typical for M18, cranberry was absent from the areas that were accessible and there are areas of open water areas with *Potentilla palustris*. It is considered likely that M18 habitat was once more common in the area but due to modification from drainage and grazing has now transitions to sphagnum rich M20 and that this remaining area is in the early stages of that transition.





Photo 3-9: M18 along the proposed Access Route A

#### M19 Calluna vulgaris – Eriophorum vaginatum blanket mire

The M19 mire community was potentially once a common type of peatland community found within the survey area and has likely changed to M20 community across some areas due to modification by drainage and grazing. *Calluna vulgaris* is particularly sensitive to grazing and it is typically absent from M20 mire which is more dominated by less palatable *Eriophorum* species. The majority of M19 was considered to be blanket bog with only the more highly modified areas categorised as dry modified bog.

M19 was common along the proposed Access Route A. Within the Site, M19 was restricted in extent to patches on the flatter areas, and the lower gradient slopes on the upper slopes of Ox Hill (Photo 3-10), the summit of Carnine Hill, west of Herd Naze, to the east of Meikledodd Hill and just south of Magheuchan Rig. Some of these areas have been subject to modification by drainage, with several ditches being clearly present on the ground and on aerial imagery, which have likely altered the species present and these areas are therefore mapped as dry modified bog.

The M19 mire is dominated by mosses including Sphagnum capillifolium, S. papillosum, S. fallax, S. cuspidatum and S. compactum. Calluna vulgaris, Vaccinium myrtillus and Empetrum nigrum are frequent, as is Eriophorum vaginatum.



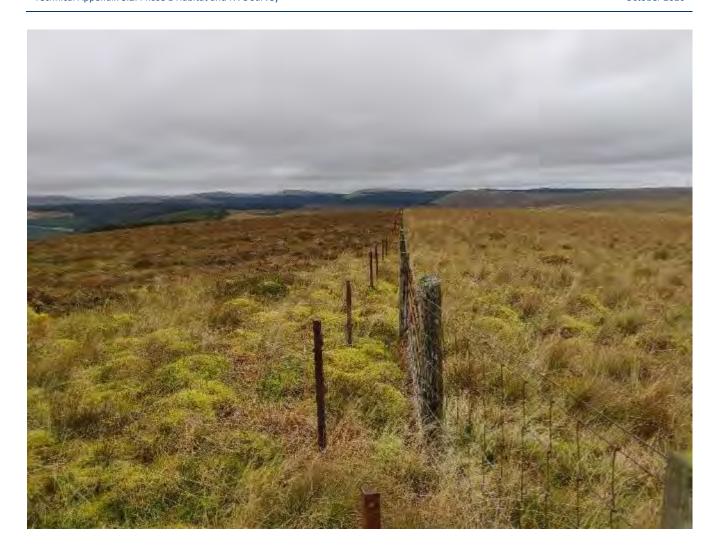


Photo 3-10: M19 left of fence, degraded to grassland / M20 to the right of fence (un-surveyed as outwith the survey area) likely due to grazing pressure

#### 3.3.15 E1.7 Wet modified bog

#### M17 Scirpus cespitosus (Trichophorum germanicum) – Eriophorum vaginatum Blanket Mire Community

This mire community was potentially once a common type of peatland community found within the survey area but has likely changed to the M20 community across some areas due to modification by drainage. M17 was fairly common along the proposed Access Route A. Within the Site, M17 was restricted in extent to patches on the flatter areas, and the lower gradient slopes along the ridge between North of Lamgarroch Hill and Colt Hill (Photo 3-11), and to the east of Lorg Hill and Meikledodd Hill. Many of these areas have been subject to modification by drainage, with several ditches being clearly present on the ground and on aerial imagery, which has likely altered the species present. For this reason, the majority of this community has been mapped as wet modified bog rather than blanket bog.

The M17 blanket mire was relatively uniform without extensive hummocks and hollows and bog pools are rare. Species present include abundant *Eriophorum vaginatum*, *Trichophorum germanicum*, *Calluna vulgaris* and *Empetrum nigrum*. Other species present at high frequency included *Sphagnum capillifolium*, *S. fallax*, *Vaccinium myrtillus* and *Deschampsia flexuosa*. The frequent presence of *E. vaginatum* and *T. germanicum* assists in separating this community from the M15 *Scirpus cespitosus-Erica tetralix* wet heath community where they are less frequent. Additionally, *Sphagnum* was typically present and in some locations was abundant.





Photo 3-11: M17 mire on Colt Hill dominated by Trichophorum germanicum

#### 3.3.16 E1.8 Dry modified bog

#### M20 Eriophorum vaginatum blanket & raised mire

M20 was present along much of the proposed Access Route A and in most areas of open hill side within or adjacent to the Site. It likely represents areas that were previously M17 and M19 but have since been modified by grazing and drainage (Photo 3-12). It was typically found on slightly steeper slopes than the remnant M17/M19 communities, often partially surrounding them. Where this communities was wetter and in better condition it was considered to be blanket bog rather than dry modified bog. M20 mire was dominated by *Eriophorum vaginatum*, with frequent *Sphagnum capillifolium*, *S. papillosum*, *S. subnitens*, *S. fallax* and *Polytrichum commune*, along with other mosses, *Galium saxatile* and *Agrostis vinealis*.

Where M20 occurs in association with erosion gullies along the proposed Access Route A it is often the Sphagnum-rich (e.g. *S. fallax* and *S. papillosum*) variant of this community.



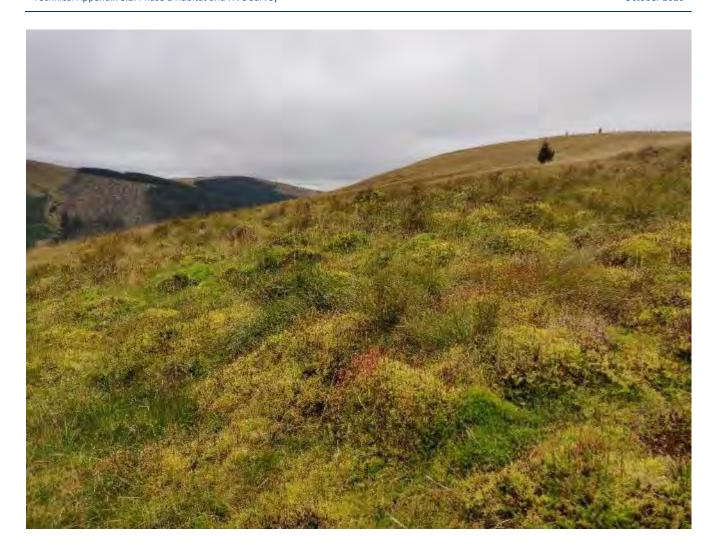


Photo 3-12: M20, rich in mosses and Eriophorum vaginatum

For other modified bog habitats see M25 (Section 3.3.9: Marshy grassland).

#### 3.3.17 E2.1 Flushes and springs - Acid/ neutral flush

#### M6 Carex echinata-Sphagnum fallax/denticulatum mire

M6 was predominantly found in small patches along the proposed Access Route A and on the slopes around Altry Hill, both as distinct patches and in mosaic with other communities, particularly M23, M25 and U4. It was dominated by *Sphagnum* species and *Juncus effusus*, with occasional *Potentilla erecta*, *Galium saxatile* and *Polytrichum commune*. Sphagnum mires are common in neglected and abandoned pastures on the upland margins. At Euchanhead, they occur in locations typical of this community including wet hollows, seepage lines, flushes, shallow gullies, and along the margins of streams and as patches within other communities.

#### 3.3.18 E2.2 Flushes and springs – Basic flush

#### M10 Carex dioica – Pinguicula vulgaris mire

M10 was present in distinct patches and in mosaic with other habitats in the area surrounding proposed Borrow Pit 7 along the proposed Access Route A (Photo 3-13). There is one particularly large, quite expansive fan of M10 base-rich flush, originating at NS65225/06904. M10 habitats at Euchanhead are typically dominated by *Tricophorum cespitosum*, *Eriophorum angustifolium*, *Carex dioica and Pinguicula vulgaris*. The area around



proposed Borrow Pit 7 is generally relatively rich in springs and flushes compared to the rest of the survey area and includes the headwaters/ source of the Bottom Burn.



Photo 3-13: M10 flush, along the proposed Access Route A

#### 3.3.19 E2.3 Flushes and springs - Acid/ neutral flush- bryophyte dominated spring

#### M31 Anthelia julacea-Sphagnum denticulatum spring

M31 was present in a very small area along the proposed Access Route A (Photo 3-14), mapped as a Target Note 25 on **Figure 8.2.2 (Appendix 01)**. This area was dominated by *Sphagnum denticulatum*, *Anthelia julacea* and *Narthecium ossifragum* and was adjacent to an area of H18 (Target Note 26). The H18 appeared to be the natural community at that location, on a steep, east/northeast facing rocky slope, at altitude of 600-660 m, which suggests that there is some snow accumulation here in winter. The M31 spring is below this area, which makes ecological sense as M31 springs are often found at high altitudes and sustained by meltwater from snow beds.





Photo 3-14: M31 spring, along the proposed Access Route A

#### M32 Philonotis fontana – Saxifraga stellaris spring

M32 springs were found along the proposed Access Route A near the location of proposed Borrow Pit 7 as four discrete areas and in mosaic with other habitats (Photo 3-15). At three of the four locations where M32 formed discrete areas, water was observed emerging from the hillside either within the polygon or close by downstream. The floral character of these M32 springs changed with distance from their sources, for example from mainly *Chiastophyllum oppositifolium*, with some *Sphagnum denticulatum*, broadening into typical bryophyte-rich M32 community, e.g. with *Saxifraga stellaris*, *Stellaria alsine*, *Philonotis fontana*, *Dicranella palustris* and *Scorpidium cossini* (Photo 3-16).





Photo 3-15: M32 spring, along proposed Access Route A



Photo 3-16: Starry saxifrage near an M32 moss-rich spring

#### 3.3.20 G1 Standing water

There were small ponds scattered thought the Site. Most were associated with drainage for infrastructure such as roads and quarries particularly along the interconnector route. These small pools are only are few years in age and supported limited vegetation such as patches of *Ranunculs aquaticus* and *Callitriche stagnalis* (Photo 3-17). Other small pools were associated with bog/ modified bog habitats and were largely colonised by mosses such as *Sphagnum cuspidatum* and other species typical of acid bog pools including *Juncus bulbosus* (Photo 3-18).





Photo 3-17: Small pond associated with track drainage





Photo 3-18: Sphagnum-rich bog pool

#### 3.3.21 I2.1 Quarries

There were three quarries within the survey area: one near Well Hill to the north of the Euchanhead forest block, one near the centre of the Polskeoch forest block, North of Altry Hill and one near the centre of the Polskeoch forest block between Herd Naze and Lamgarroch. These quarries appeared to be in recent use for aggregate extraction presumably for use on forest tracks.

#### 3.3.22 **J3.6 Buildings**

There were three areas with buildings: the substation east of Glenglass, a bothy, house and shed in the Polskeoch forest block near the Polskeoch Burn, and farm buildings at Shinnelhead.



#### 3.3.23 J4 Bare ground

Bare ground was typically found along tracks and other infrastructure and in recently clear-felled areas.

## 3.4 Vascular and non-vascular plant species

150 species of plant including flowering plants, trees, ferns mosses and liverworts were recorded within the survey area (see species list in **Appendix 03**). Of these mossy saxifrage (*Saxifraga hypnoides*) is included on the SBL (Photo 3-19). No other plant species of particular conservation interest (SBL or LBAP) were recorded.



Photo 3-19: Mossy saxifrage growing in a flushed area near the proposed Access Route A

## 3.5 Invasive and Non-native Species

*Impatiens glandulifera,* (TN 17, **Figure 8.2.1, Appendix 01**), was recorded at the Shinnelhead Farm steading, by Nith District Salmon Fisheries Board staff during the fish habitat survey<sup>13</sup>. At the time of survey, the plants had withered but were still able to be identified.

<sup>&</sup>lt;sup>13</sup> Nith District Salmon Fisheries Board. 2019. Walkover Fisheries Survey In Relation To The Proposed Euchanhead Renewable Energy Development In South West Scotland.



In addition, non-native tree species were common in broadleaved plantation woodland, and *Cotoneaster* and *Crocosmia*, both common garden escapes, were found near Shinnelhead (TN 1 and 2, **Figure 8.2.1, Appendix 01**).



## 4.0 Summary

The 2,765 ha survey area supports over 2,000 ha of coniferous plantation or recently felled coniferous plantation. These areas were not subject to NVC survey.

The NVC survey results show that the remainder of the survey area is predominantly covered with acid grassland and peatland habitats, including blanket bog, wet and dry modified bog, swamp, flushes and springs, and marshy grassland communities. In addition, there are smaller areas of semi-improved neutral grassland and bracken present. **Table 3-1** sets out a summary of the NVC communities present and the most closely associated Phase 1 habitat code.

Flushes and springs are particularly frequent along the proposed Access Route A, where the occurrence of baserich communities such as M10 indicate a possible groundwater influence. These base-rich flushes/ springs area also associated with the only small areas of calcareous grassland within the survey area (CG10 and U5c).

Only less modified, more *Sphagnum* rich heath/bog community polygons have been classed as blanket bog (116.33 ha) with the rest being attributed to marshy grassland (96.55 ha) and wet (33.45 ha) or dry (31.19 ha) modified bog. Bog and heath communities are common on the open ground areas particularly around the surveyed margins of the Polskeoch forest block and along the proposed Access Route A.

A number of heath and bog habitats are listed on Annex 1 of the Habitats Directive (**Table 3-1**). All stands of M3, M18 and M17 are considered to be Annex 1 blanket bog and most non-montane stands of H18 are considered to be Annex 1: H4030, European dry heath. However, it is important to note that some communities such as M15, M19, M20 and M25 are only Annex 1 habitats in certain contexts: e.g. where they are on peat < 0.5 m deep (M15- Annex 1: H4010 – Northern Atlantic wet heaths with *Erica tetralix, wet heath stands*<sup>14</sup>); where they are on peat > 0.5 m deep or associated with blanket bog (M19 and M20); and associated with blanket bog on peat > 0.5 m deep (M15, M25)- Annex 1: H7130 – Blanket Bog.

All areas mapped as Phase 1 blanket bog are on peat >0.5 m or contain NVC communities that are considered to be blanket bog regardless of peat depth (M3, M18 and M17), all areas of Phase 1 blanket bog are therefore considered to be Annex 1: H7130 – Blanket Bog.

All areas of wet heath (M15) on peat < 0.5 m are considered to be Annex 1: H4010 – Northern Atlantic wet heaths.

Adopting a precautionary approach all areas mapped as wet modified bog are also considered to be Annex 1: H7130 – Blanket Bog and all areas of dry heath (H12, H18 and H21) are considered to be Annex 1: H4030 – European dry heath.

The locations of potential GWDTE habitats are shown on **Figure 8.2.3 (Appendix 01)**. It must be stressed that the NVC survey is only able to identify communities which are potentially groundwater dependent and in practice some of the areas may not actually represent GWDTEs. Current SEPA guidance states that, "if any GWDTEs are located within a radius of (i) 100 m from roads, tracks and trenches or (ii) 250 m from borrow pits and foundations the likely impact of these features will require further assessment". Further assessment of potential GWDTEs is presented in the Hydrology, Hydrogeology, Geology and Soils chapter of the EIA Report.

<sup>&</sup>lt;sup>14</sup> Note that at this site *Erica tetralix* was not always frequent in M15 communities due to community modification by grazing pressure and therefore these areas may not qualify as Annex 1 but are considered Annex 1 on a precautionary basis.



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## **APPENDIX 01**

## **Figures**

### Figure 8.2.1: Phase 1 Habitat Map

Sheet 01: Northern Euchanhead

Sheet 02: Southern Euchanhead & South of Proposed Access Route A

Sheet 03: North of Proposed Access Route A

Sheet 04: Northern Polskeoch

Sheet 05: Central Polskeoch and Northern Shinnelhead

Sheet 06: Shinnelhead

## Figure 8.2.2: National Vegetation Classification Map

Sheet 01: Northern Euchanhead

Sheet 02: Southern Euchanhead & South of Proposed Access Route A

Sheet 03: North of Proposed Access Route A

Sheet 04: Northern Polskeoch

Sheet 05: Central Polskeoch and Shinnelhead

Sheet 06: Shinnelhead

## Figure 8.2.3: Potential Groundwater Dependent Terrestrial Ecosystems

Sheet 01: Northern Euchanhead

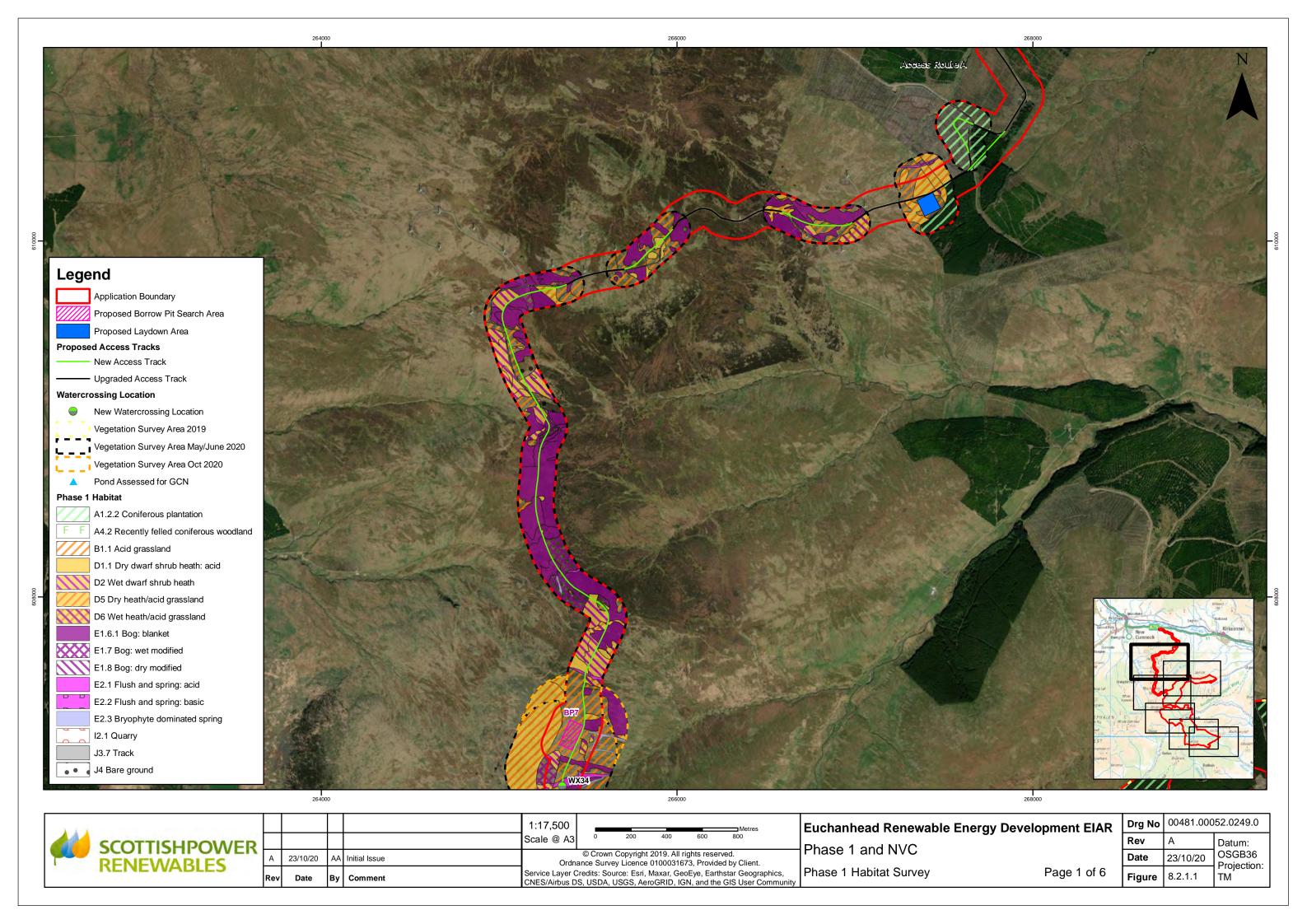
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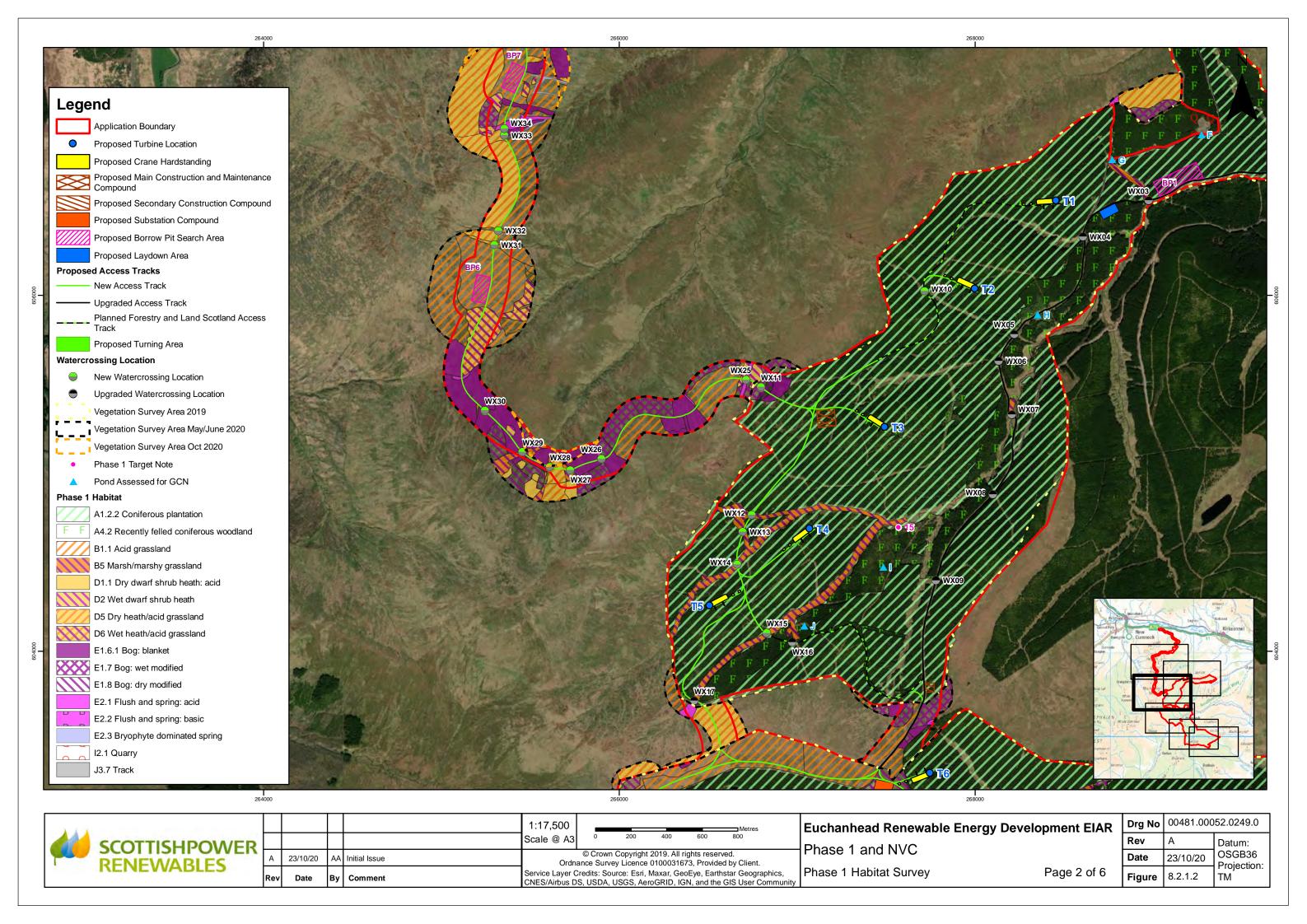
Sheet 03: North of Proposed Access Route A

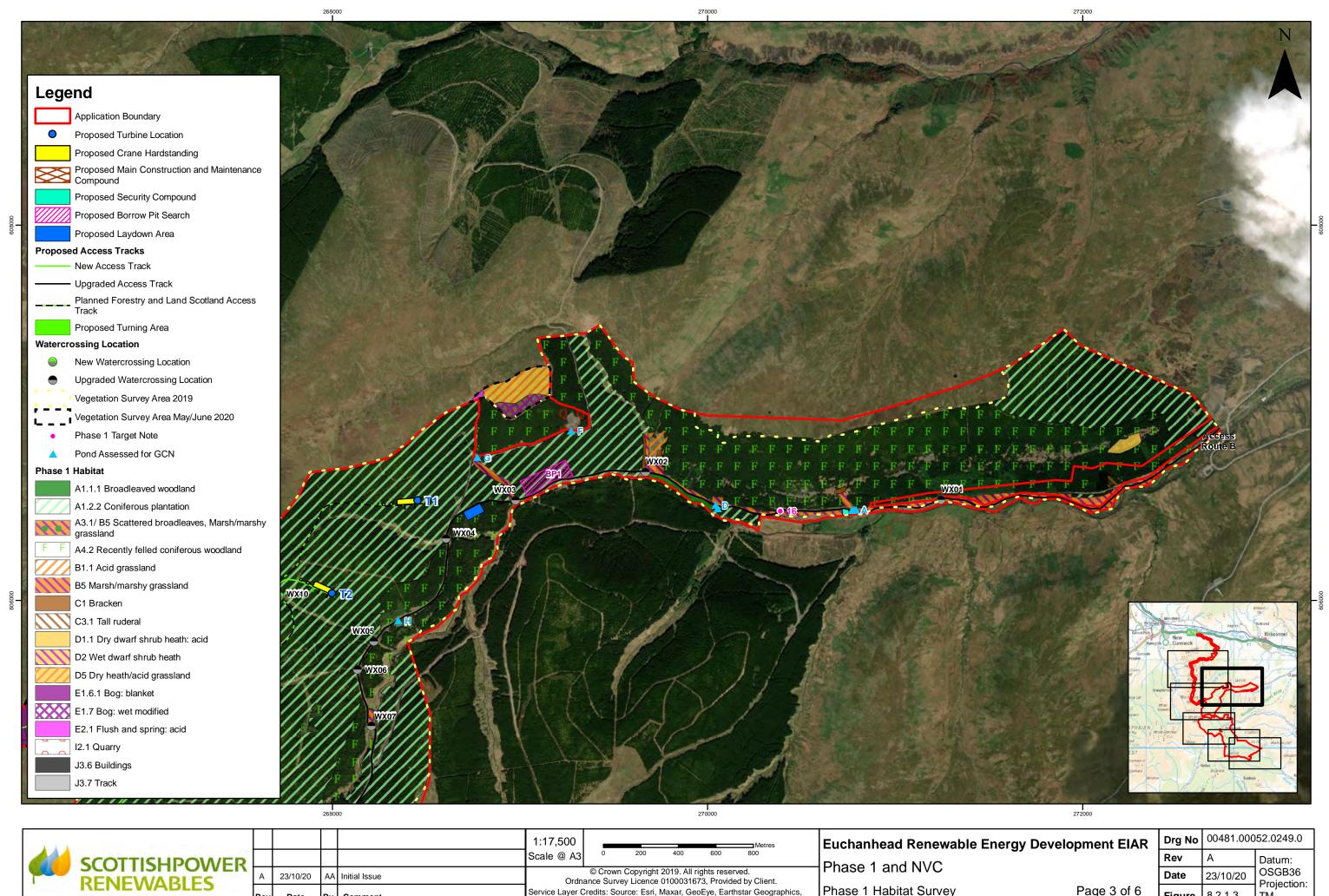
Sheet 04: Northern Polskeoch

Sheet 05: Central Polskeoch and Northern Shinnelhead

Sheet 06: Shinnelhead





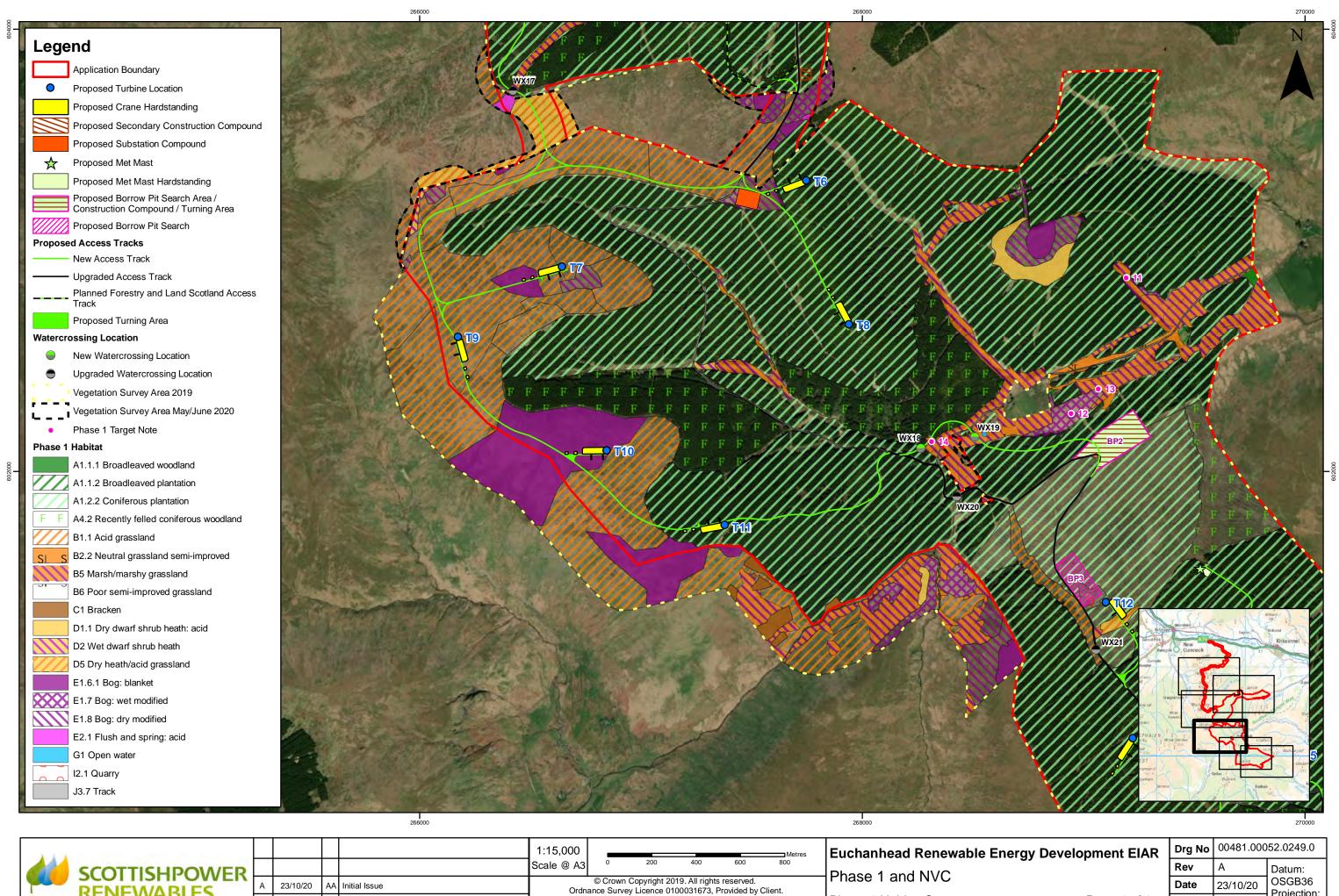


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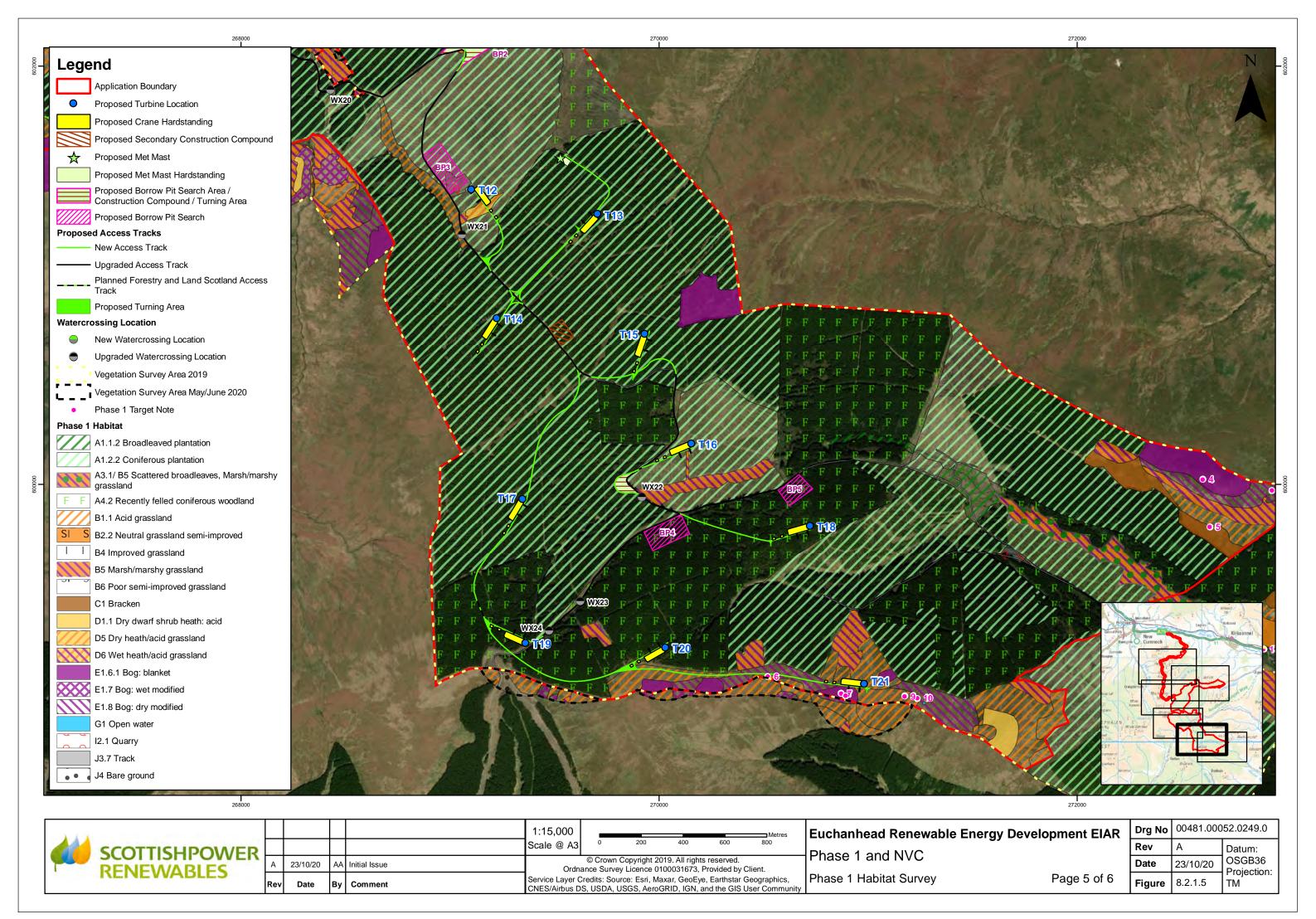
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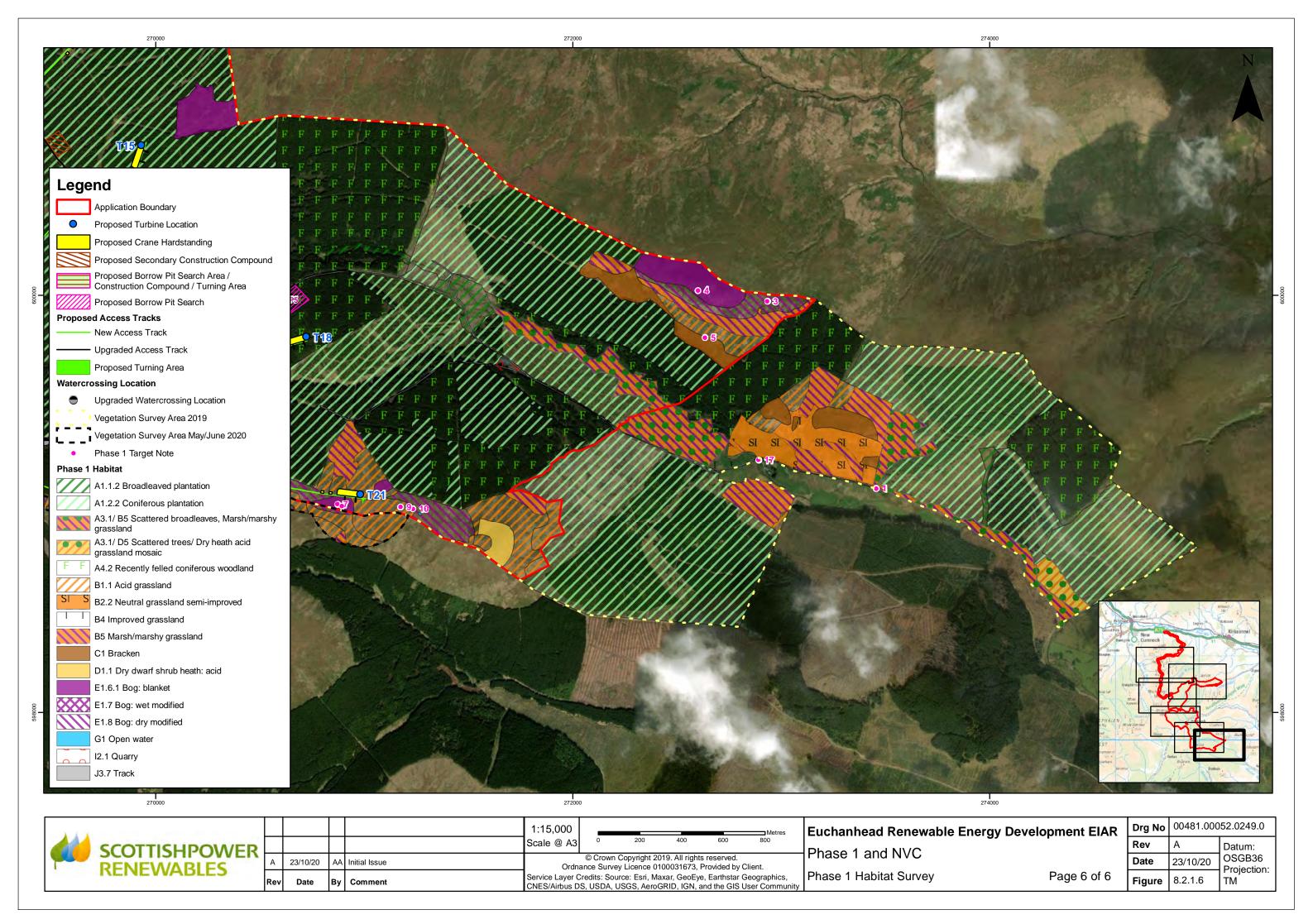
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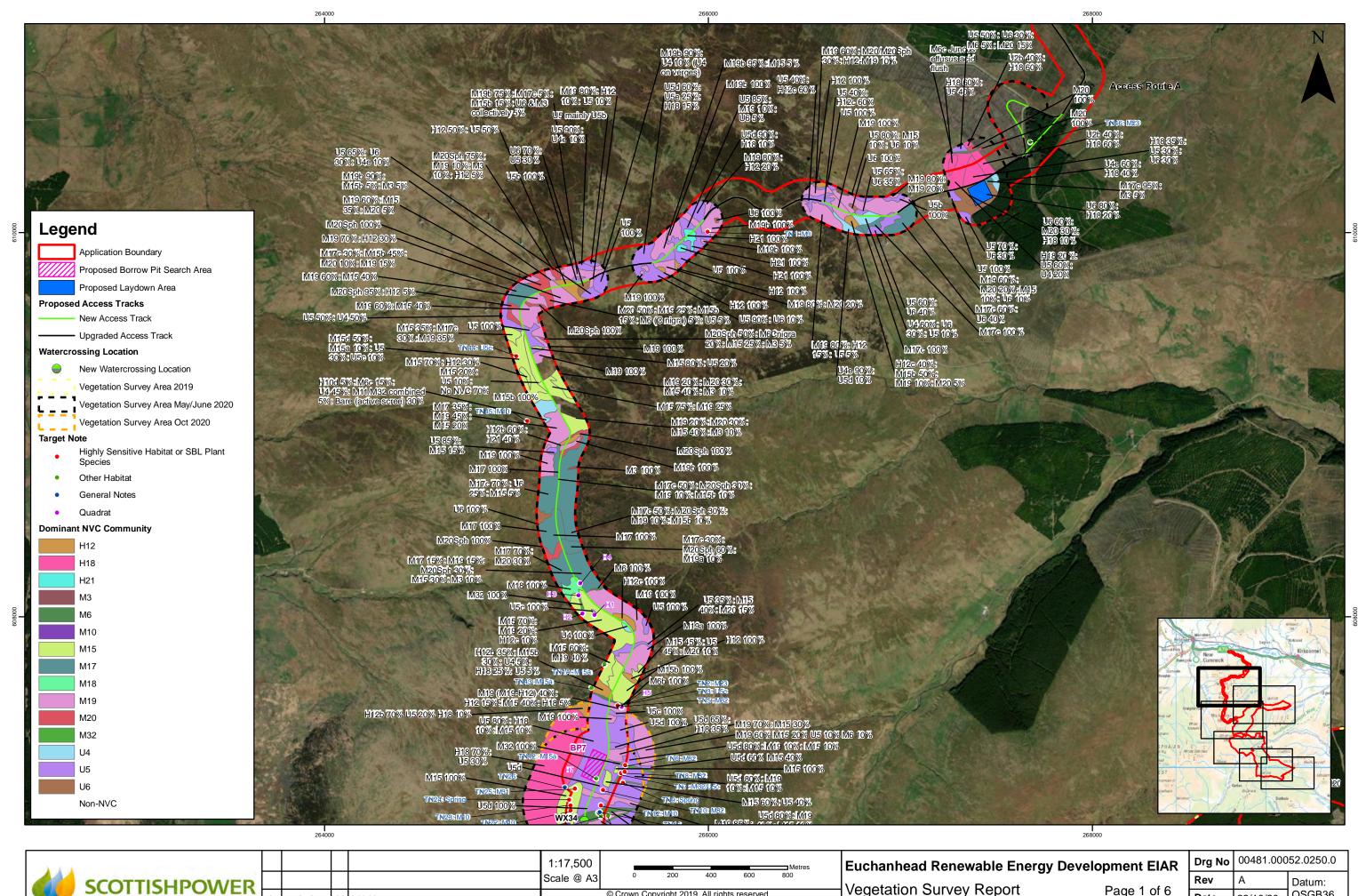
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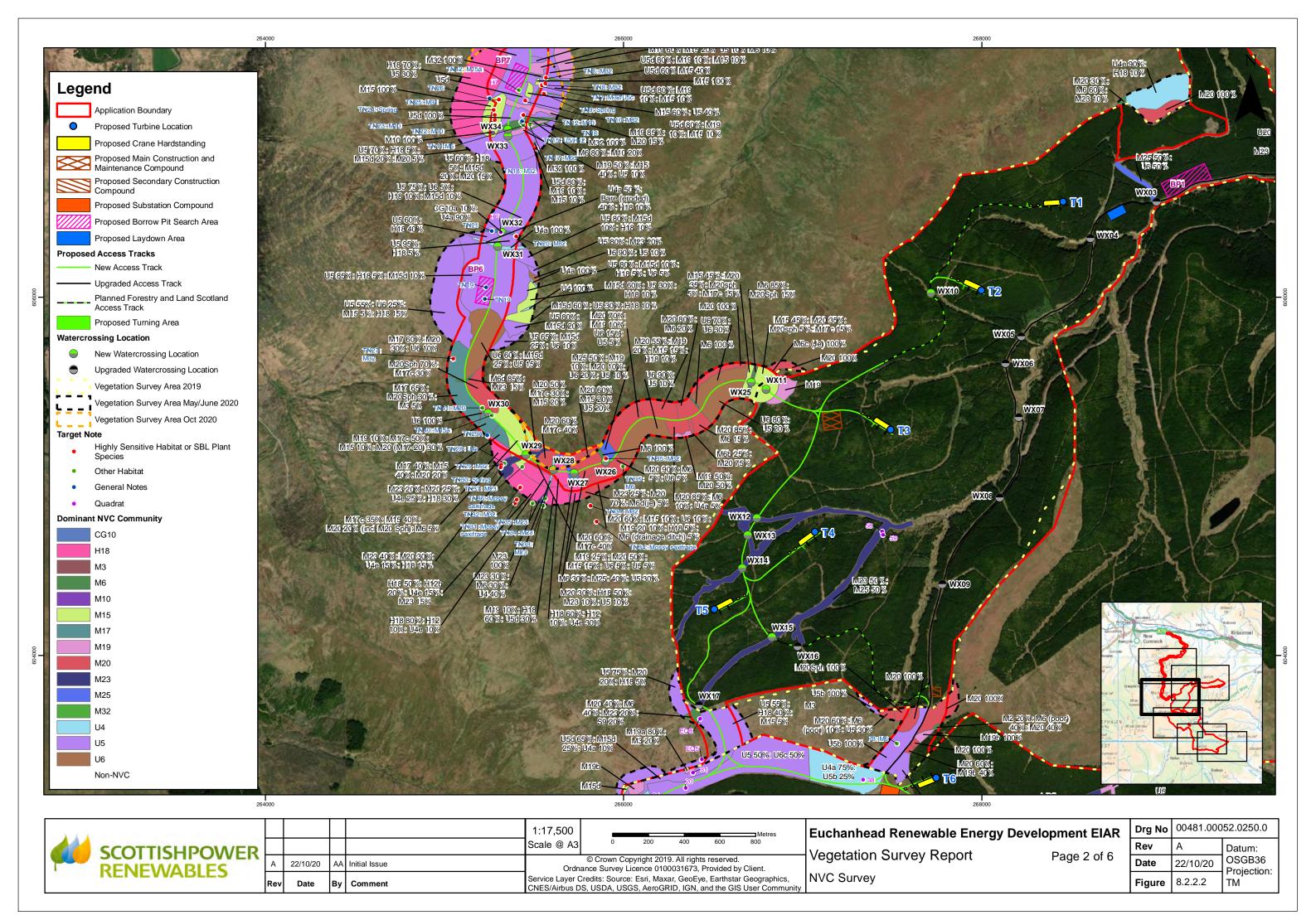


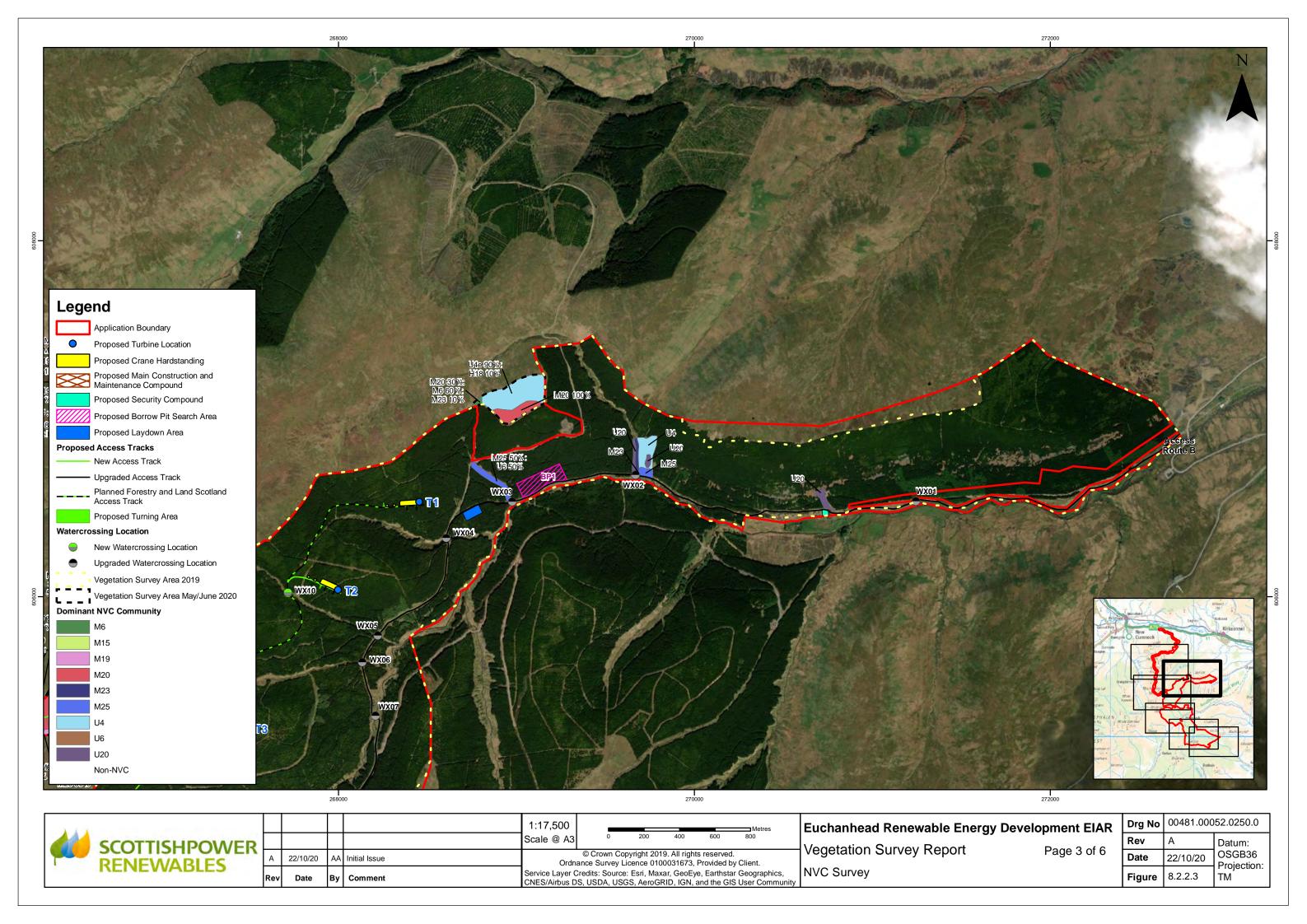
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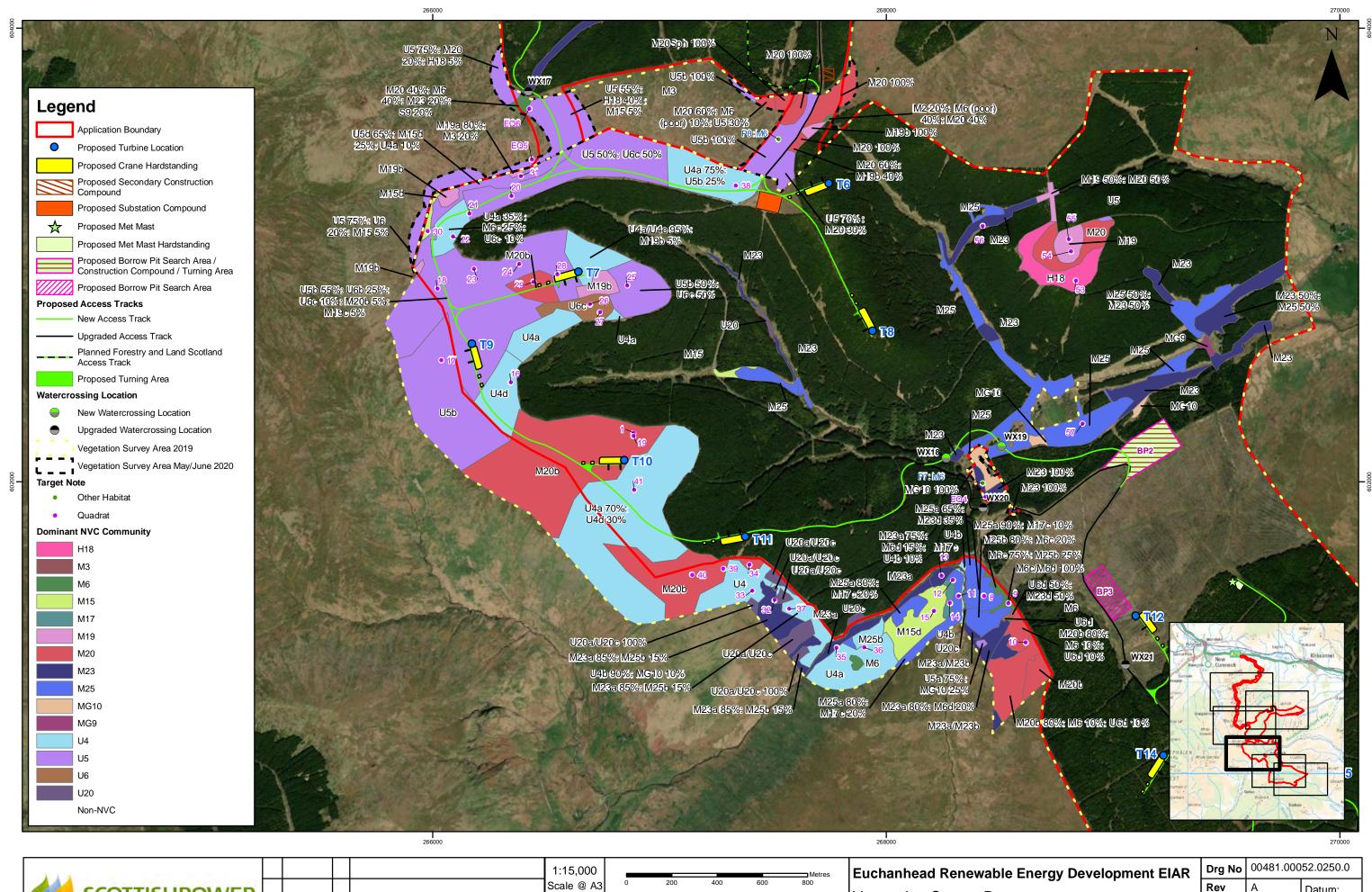
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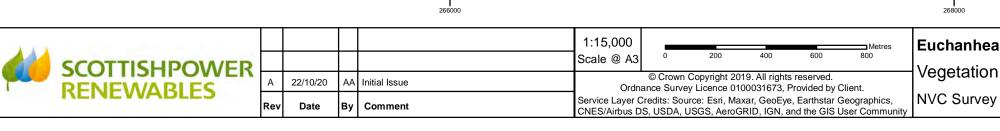
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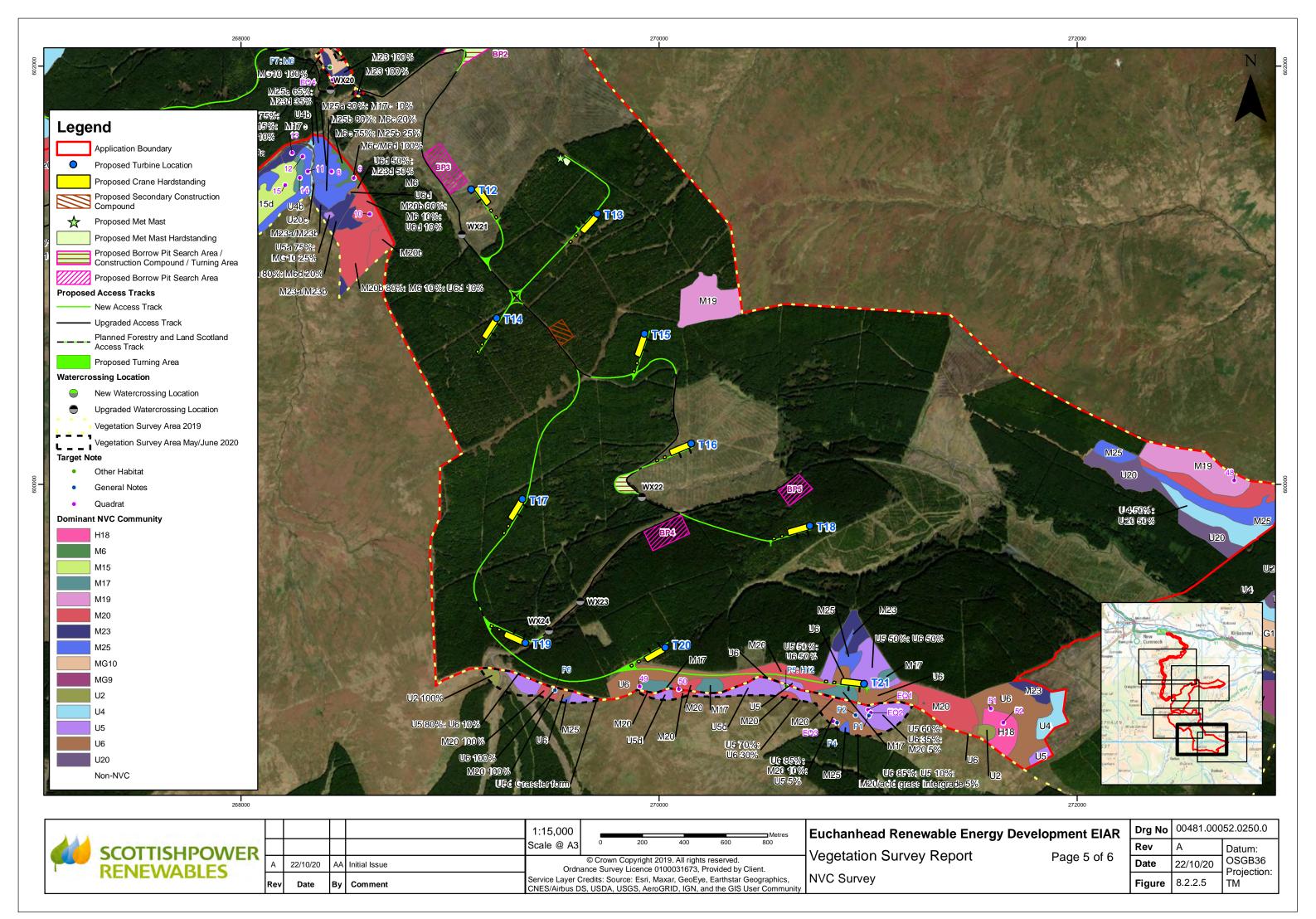


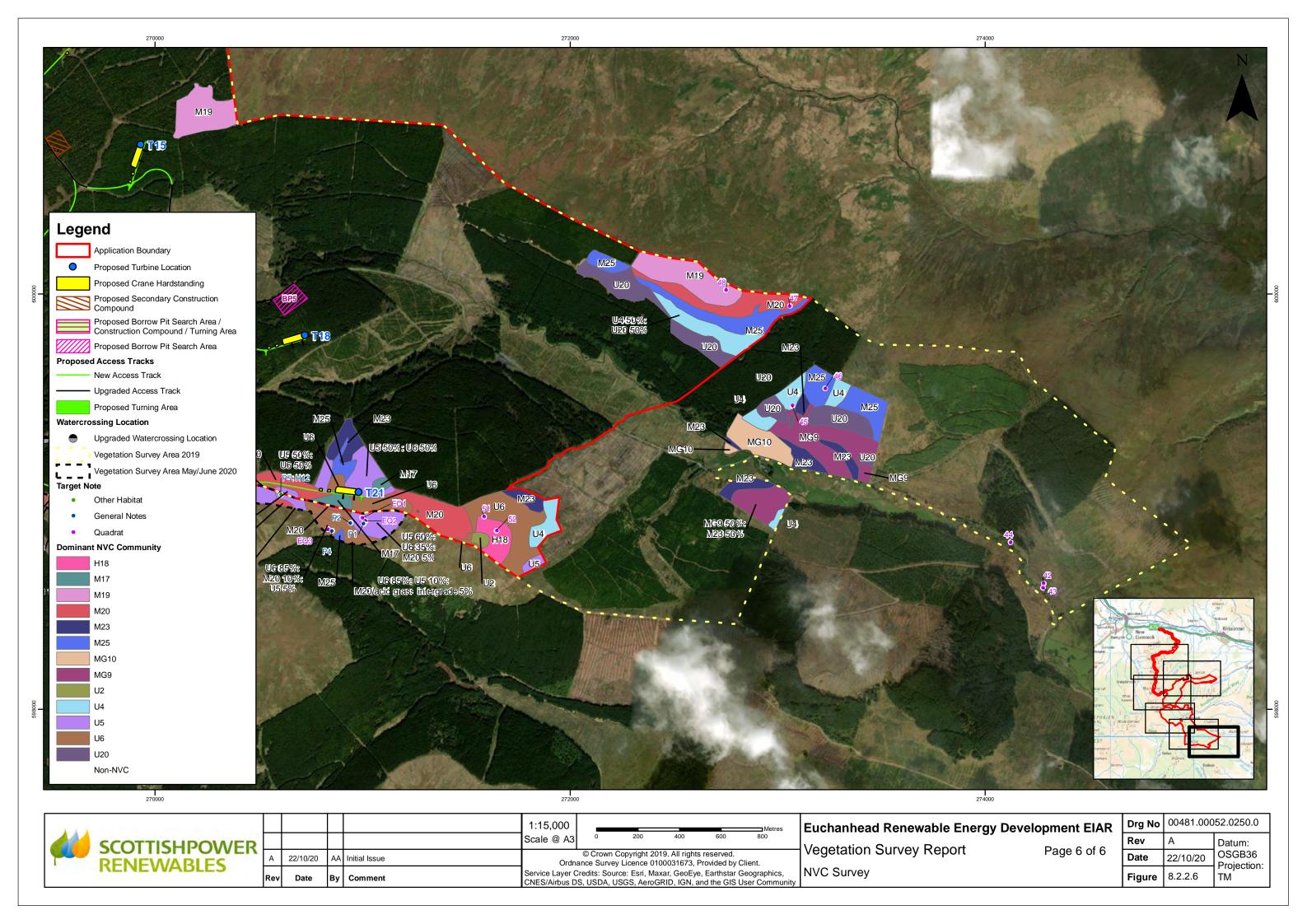


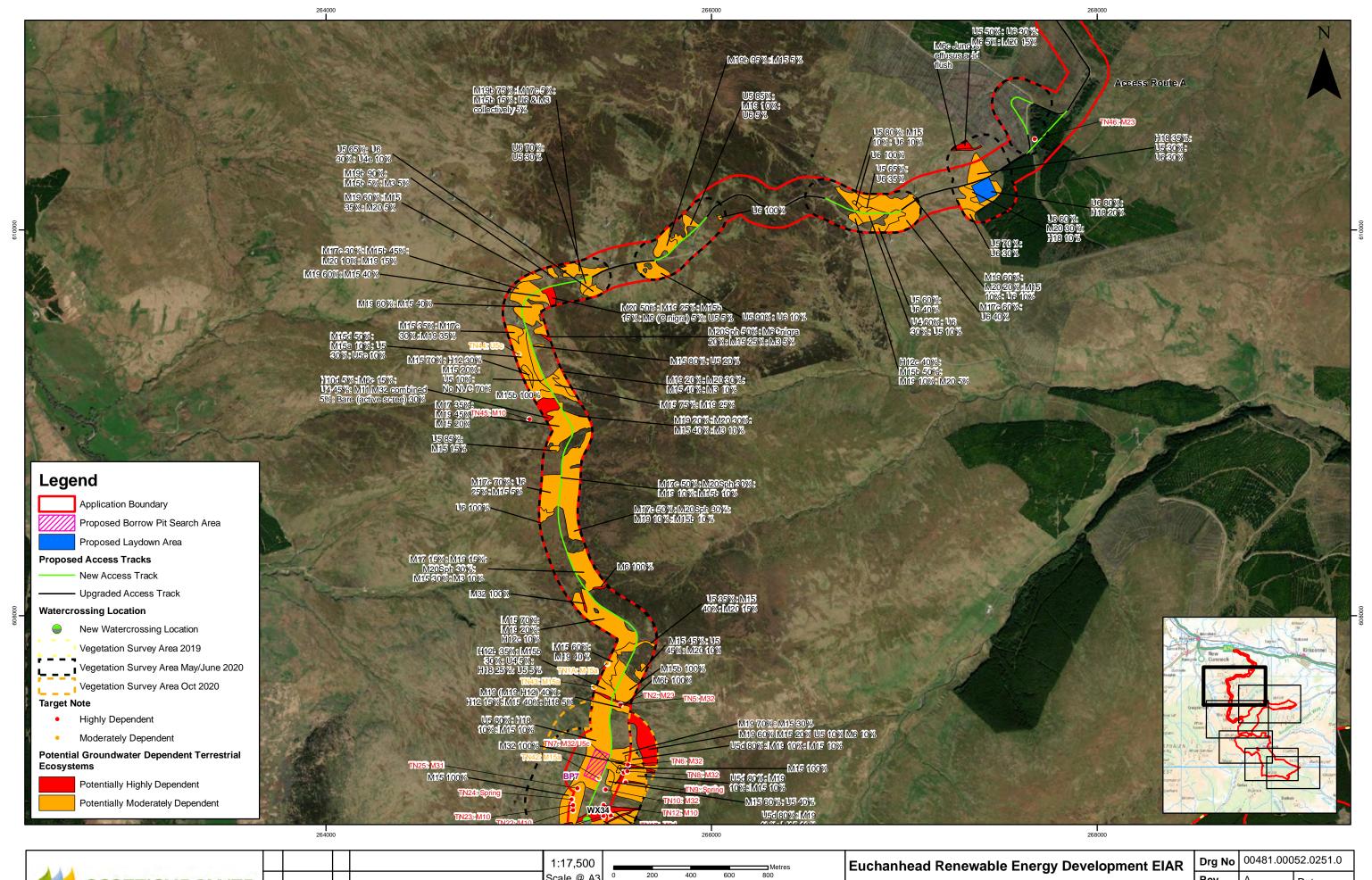


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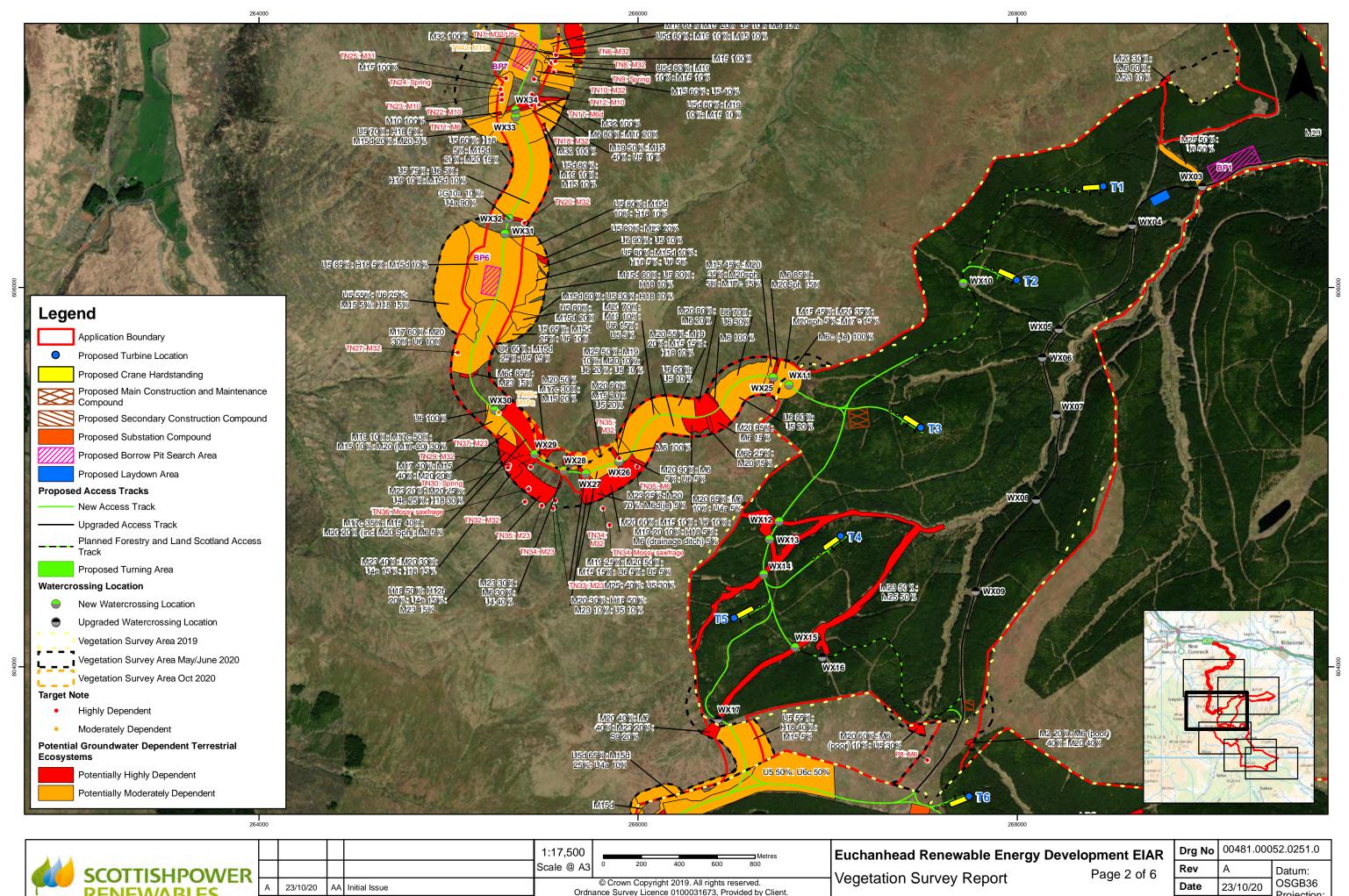


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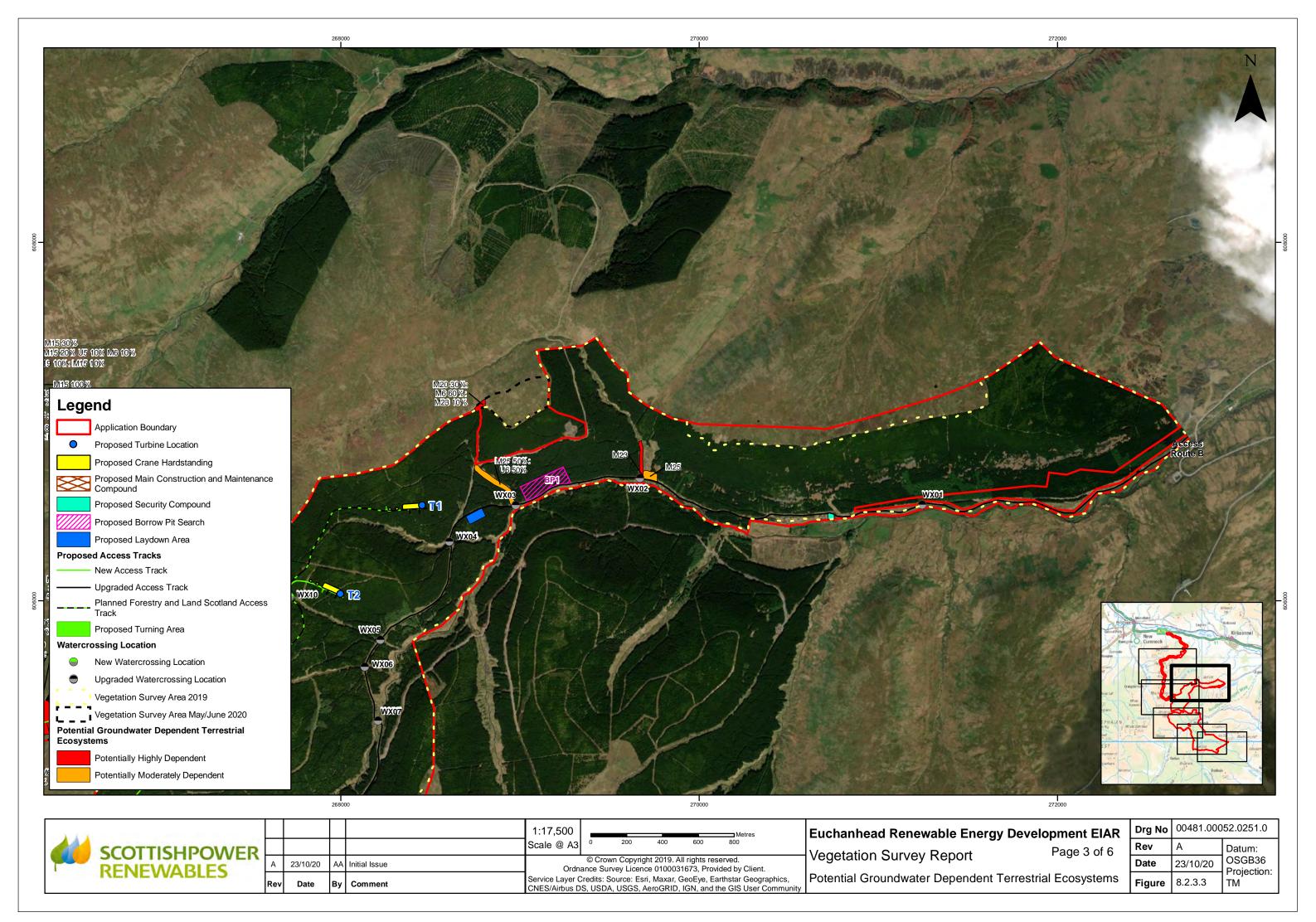


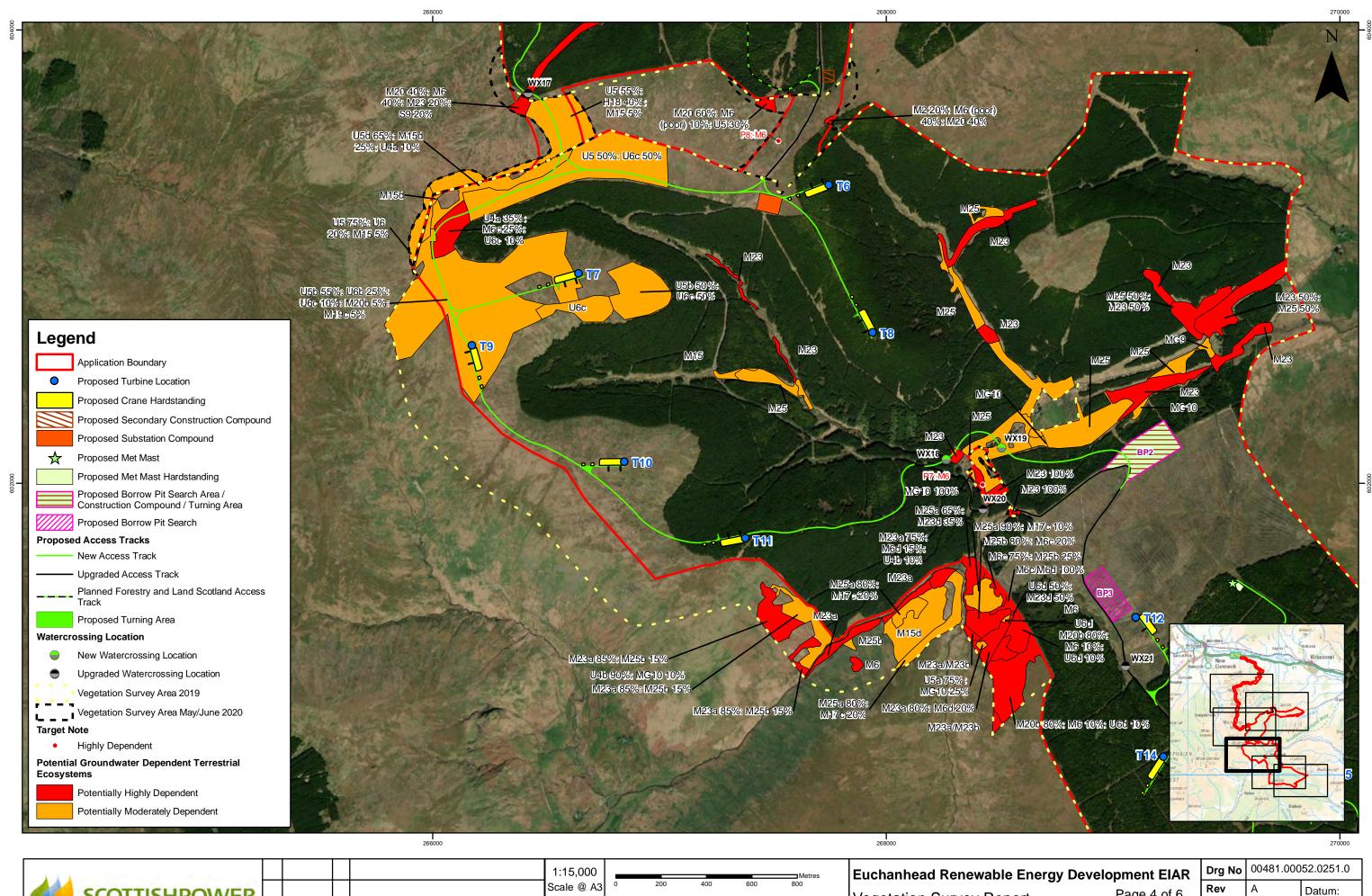
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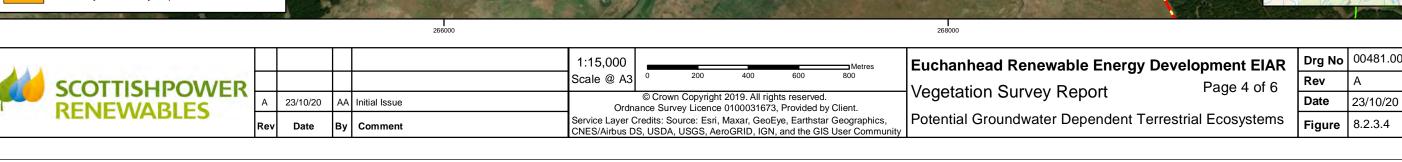
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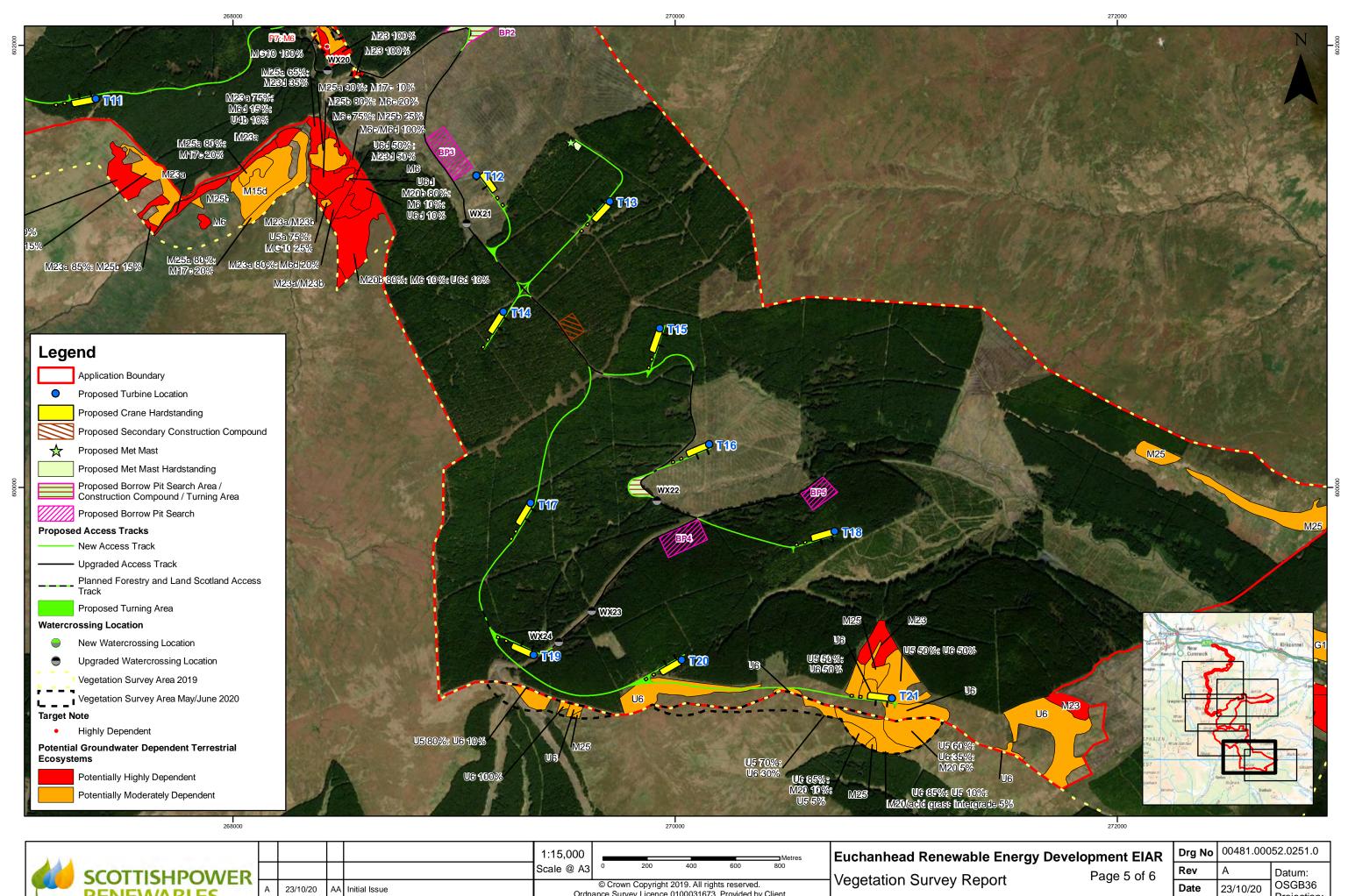




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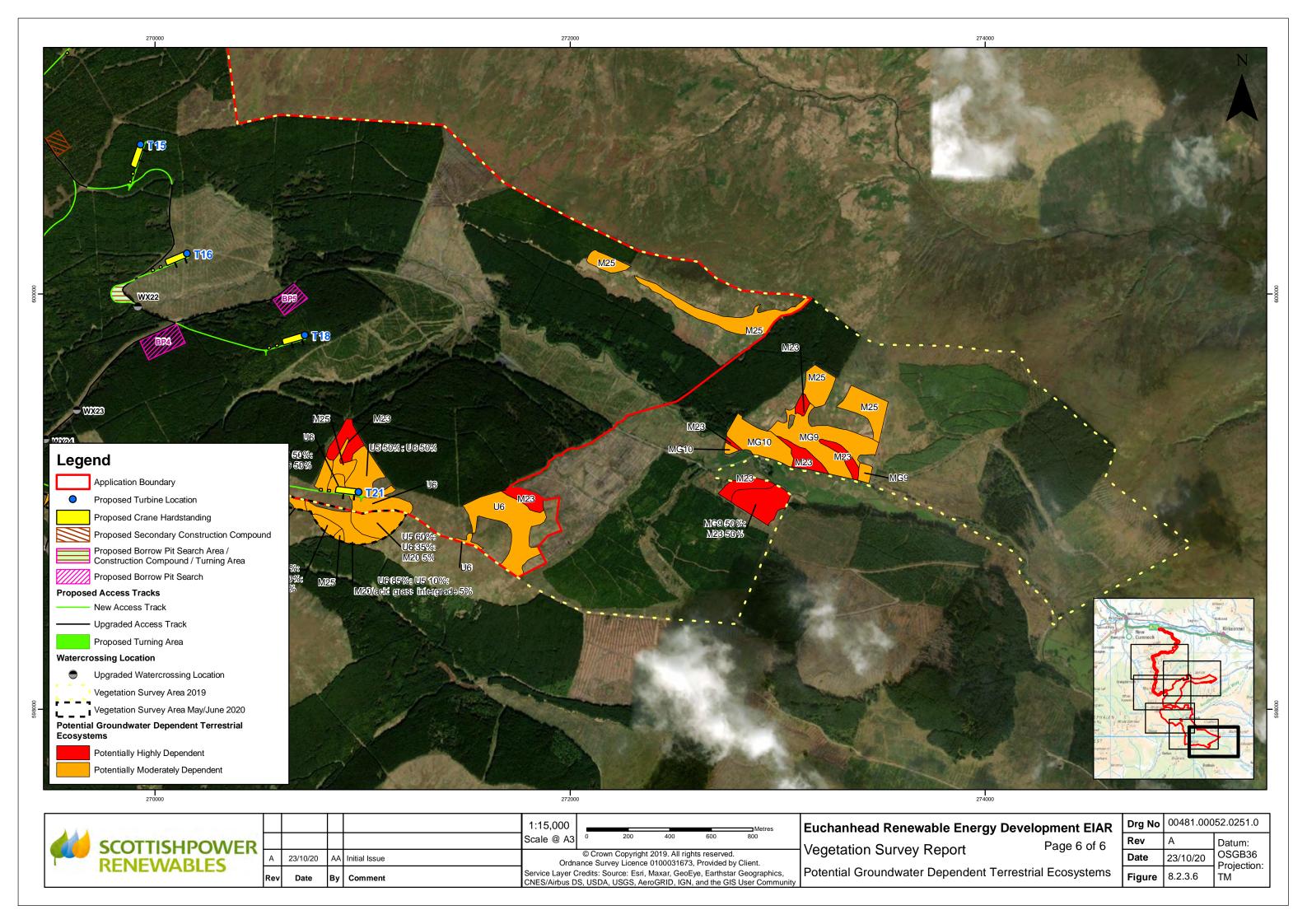
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## **APPENDIX 02**

## Target Note and Quadrat Details

**Table A2-1: Phase 1 Target Notes** 

Target Note	Note	Detail
1	Crocosmia plants	Non-native species
2	Cotoneaster bush	Non-native species
3	Flush M23	Rushy, no <i>Sphagnum</i>
4	Flush	Sphagnum rich
5	Exposed scree	
6	Drain line	
7	Drainage ditch	
8	M17 species-rich	Eriophorum vaginatum rich, with Sphagnum capillifolium, Vaccinium myrtillus and Calluna vulgaris
9	Ditch	
10	Pond	
11	Wet flush	Neutral, wet and rich in <i>Juncus effusus, Deschampsia cespitosa</i> and <i>Holcus lanatus</i>
12	Drainage ditch	
13	Carex rostrata swamp	
14	Tree planting	
15	Flush type habitat	Rich in <i>Philonotis spp.</i> and <i>Eriophorum angustifolium</i>
16	Birch grove	Includes some heath and <i>Molinia</i> rich grassland
17	Himalayan balsam	Non-native invasive species

**Table A2-2: NVC Quadrat Data** 

Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
1	266886	602217	M20	Anthoxanthum odoratum	2
1	266886	602217	M20	Deschampsia flexuosa	8
1	266886	602217	M20	Eriophorum angustifolium	7
1	266886	602217	M20	Galium saxatile	4
1	266886	602217	M20	Hylocomium splendens	5
1	266886	602217	M20	Pleurozium schreberi	2
1	266886	602217	M20	Polytrichum commune	4
1	266886	602217	M20	Sphagnum fallax	8
1	266886	602217	M20	Sphagnum subnitens	6
1	266886	602217	M20	Vaccinium myrtillus	4
8	268431	601498	M25/M17 (90/10)	Molinia caerulea	10
8	268431	601498	M25/M17 (90/10)	Eriophorum vaginatum	5
8	268431	601498	M25/M17 (90/10)	Galium saxatile	3
8	268431	601498	M25/M17 (90/10)	Hypnum jutlandicum	3
8	268431	601498	M25/M17 (90/10)	Polytrichum commune	4
8	268431	601498	M25/M17 (90/10)	Potentilla erecta	3
9	268538	601466	M6	Juncus effusus	10
9	268538	601466	M6	Galium saxatile	3
9	268538	601466	M6	Polytrichum commune	5
9	268538	601466	M6	Potentilla erecta	4
9	268538	601466	M6	Spagnum sp.	10
10	268614	601292	M20/M6/U6 (80/10/10)	Eriophorum angustifolium	3
10	268614	601292	M20/M6/U6 (80/10/10)	Eriophorum vaginatum	8
10	268614	601292	M20/M6/U6 (80/10/10)	Galium saxatile	3
10	268614	601292	M20/M6/U6 (80/10/10)	Hylocomium splendens	5
10	268614	601292	M20/M6/U6 (80/10/10)	Juncus squarrosus	3
10	268614	601292	M20/M6/U6 (80/10/10)	Plagiothecium undulatum	2
10	268614	601292	M20/M6/U6 (80/10/10)	Polytrichum commune	4
10	268614	601292	M20/M6/U6 (80/10/10)	Potentilla erecta	4
10	268614	601292	M20/M6/U6 (80/10/10)	Spagnum sp.	7
11	268318	601498	M25/M17 (80/20)	Molinia caerulea	9
11	268318	601498	M25/M17 (80/20)	Hylocomium splendens	4
11	268318	601498	M25/M17 (80/20)	Polytrichum commune	6
11	268318	601498	M25/M17 (80/20)	Potentilla erecta	3

Quadrat	Х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
11	268318	601498	M25/M17 (80/20)	Spagnum sp.	4
11	268318	601498	M25/M17 (80/20)	Sphagnum capillifolium	4
12	268293	601568	M25/M17 (80/20)	Molinia caerulea	8
12	268293	601568	M25/M17 (80/20)	Nardus stricta	7
12	268293	601568	M25/M17 (80/20)	Sedge sp.	1
12	268293	601568	M25/M17 (80/20)	Trichophorum cespitosum	8
12	268293	601568	M25/M17 (80/20)	Vaccinium myrtillus	3
13	268243	601586	M23/M6/U4 (75/25)	Holcus lanatus	9
13	268243	601586	M23/M6/U4 (75/25)	Agrostis stolonifera	5
13	268243	601586	M23/M6/U4 (75/25)	Deschampsia cespitosa	3
13	268243	601586	M23/M6/U4 (75/25)	Deschampsia flexuosa	4
13	268243	601586	M23/M6/U4 (75/25)	Galium saxatile	4
13	268243	601586	M23/M6/U4 (75/25)	Juncus squarrosus	4
13	268243	601586	M23/M6/U4 (75/25)	Nardus stricta	5
13	268243	601586	M23/M6/U4 (75/25)	Polytrichum commune	6
13	268243	601586	M23/M6/U4 (75/25)	Rumex sp.	2
14	268280	601467	M17	Molinia caerulea	4
14	268280	601467	M17	Calluna vulgaris	5
14	268280	601467	M17	Eriophorum angustifolium	5
14	268280	601467	M17	Hypnum jutlandicum	4
14	268280	601467	M17	Polytrichum commune	2
14	268280	601467	M17	Potentilla erecta	3
14	268280	601467	M17	Spagnum sp.	6
14	268280	601467	M17	Trichophorum cespitosum	4
14	268280	601467	M17	Vaccinium myrtillus	2
15	268210	601431	M15	Molinia caerulea	7
15	268210	601431	M15	Eriophorum vaginatum	7
15	268210	601431	M15	Juncus squarrosus	3
15	268210	601431	M15	Polytrichum commune	5
15	268210	601431	M15	Potentilla erecta	3
15	268210	601431	M15	Sphagnum capillifolium	6
16	266345	602439	U4	Agrostis canina	4
16	266345	602439	U4	Agrostis capillaris	2
16	266345	602439	U4	Agrostis stolonifera	2
16	266345	602439	U4	Anthoxanthum odoratum	5

Quadrat ID	Х	Υ	NVC of polygon	Species Latin name	Abundance (Domin)
16	266345	602439	U4	Carex panicea	3
16	266345	602439	U4	Fragaria vesca	1
16	266345	602439	U4	Galium saxatile	8
16	266345	602439	U4	Hylocomium splendens	8
16	266345	602439	U4	Nardus stricta	4
16	266345	602439	U4	Pleurozium schreberi	1
16	266345	602439	U4	Polytrichum commune	6
16	266345	602439	U4	Potentilla erecta	2
16	266345	602439	U4	Rhytidiadelphus squarrosus	7
16	266345	602439	U4	Vaccinium myrtillus	3
17	266037	602536	U5	Agrostis sp.	8
17	266037	602536	U5	Anthoxanthum odoratum	3
17	266037	602536	U5	Galium saxatile	8
17	266037	602536	U5	Hylocomium splendens	8
17	266037	602536	U5	Hypnum jutlandicum	3
17	266037	602536	U5	Juncus squarrosus	4
17	266037	602536	U5	Nardus stricta	8
17	266037	602536	U5	Plagiothecium undulatum	2
17	266037	602536	U5	Polytrichum commune	4
17	266037	602536	U5	Rhytidiadelphus loreus	3
17	266037	602536	U5	Vaccinium myrtillus	1
18	266020	602851	M19	Agrostis sp.	4
18	266020	602851	M19	Calluna vulgaris	8
18	266020	602851	M19	Empetrum nigrum	7
18	266020	602851	M19	Eriophorum angustifolium	3
18	266020	602851	M19	Eriophorum vaginatum	8
18	266020	602851	M19	Hypnum jutlandicum	3
18	266020	602851	M19	Polytrichum commune	2
18	266020	602851	M19	Rhytidiadelphus loreus	4
18	266020	602851	M19	Rubus chamaemorus	3
18	266020	602851	M19	Spagnum sp.	3
18	266020	602851	M19	Vaccinium myrtillus	4
18	266020	602851	M19	Vaccinium vitis-idaea	4
19	266886	602202	M20	Agrostis sp.	2
19	266886	602202	M20	Deschampsia flexuosa	2

Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
19	266886	602202	M20	Eriophorum angustifolium	4
19	266886	602202	M20	Eriophorum vaginatum	5
19	266886	602202	M20	Hylocomium splendens	4
19	266886	602202	M20	Hypnum jutlandicum	1
19	266886	602202	M20	Nardus stricta	3
19	266886	602202	M20	Polytrichum commune	4
19	266886	602202	M20	Rhytidiadelphus squarrosus	2
19	266886	602202	M20	Spagnum sp.	3
19	266886	602202	M20	Vaccinium myrtillus	6
20	266347	603260	U5/U6 (85/15)	Agrostis sp.	3
20	266347	603260	U5/U6 (85/15)	Anthoxanthum odoratum	2
20	266347	603260	U5/U6 (85/15)	Eriophorum angustifolium	2
20	266347	603260	U5/U6 (85/15)	Galium saxatile	7
20	266347	603260	U5/U6 (85/15)	Hylocomium splendens	9
20	266347	603260	U5/U6 (85/15)	Nardus stricta	8
20	266347	603260	U5/U6 (85/15)	Pleurozium schreberi	2
20	266347	603260	U5/U6 (85/15)	Potentilla erecta	5
20	266347	603260	U5/U6 (85/15)	Rhytidiadelphus loreus	4
20	266347	603260	U5/U6 (85/15)	Rhytidiadelphus squarrosus	7
20	266347	603260	U5/U6 (85/15)	Vaccinium myrtillus	4
21	266162	603182	U5/U6 (85/15)	Agrostis sp.	2
21	266162	603182	U5/U6 (85/15)	Anthoxanthum odoratum	1
21	266162	603182	U5/U6 (85/15)	Eriophorum angustifolium	1
21	266162	603182	U5/U6 (85/15)	Galium saxatile	6
21	266162	603182	U5/U6 (85/15)	Hylocomium splendens	2
21	266162	603182	U5/U6 (85/15)	Hypnum jutlandicum	3
21	266162	603182	U5/U6 (85/15)	Nardus stricta	9
21	266162	603182	U5/U6 (85/15)	Pleurozium schreberi	5
21	266162	603182	U5/U6 (85/15)	Potentilla erecta	5
21	266162	603182	U5/U6 (85/15)	Rhytidiadelphus loreus	5
21	266162	603182	U5/U6 (85/15)	Rhytidiadelphus squarrosus	2
21	266162	603182	U5/U6 (85/15)	Vaccinium myrtillus	3
21	266162	603182	U5/U6 (85/15)	Vaccinium vitis-idaea	2
22	266089	603081	U4/U6/M6 (65/25/10)	Agrostis sp.	2
22	266089	603081	U4/U6/M6 (65/25/10)	Anthoxanthum odoratum	1

Quadrat	Х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
22	266089	603081	U4/U6/M6 (65/25/10)	Deschampsia flexuosa	2
22	266089	603081	U4/U6/M6 (65/25/10)	Eriophorum angustifolium	2
22	266089	603081	U4/U6/M6 (65/25/10)	Festuca ovina	3
22	266089	603081	U4/U6/M6 (65/25/10)	Galium saxatile	6
22	266089	603081	U4/U6/M6 (65/25/10)	Hylocomium splendens	3
22	266089	603081	U4/U6/M6 (65/25/10)	Hypnum jutlandicum	6
22	266089	603081	U4/U6/M6 (65/25/10)	Pleurozium schreberi	6
22	266089	603081	U4/U6/M6 (65/25/10)	Polytrichum commune	7
22	266089	603081	U4/U6/M6 (65/25/10)	Potentilla erecta	3
22	266089	603081	U4/U6/M6 (65/25/10)	Rhytidiadelphus loreus	4
22	266089	603081	U4/U6/M6 (65/25/10)	Rhytidiadelphus squarrosus	6
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Agrostis sp.	4
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Anthoxanthum odoratum	6
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Deschampsia flexuosa	3
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Eriophorum angustifolium	2
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Festuca ovina	4
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Galium saxatile	7
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Hylocomium splendens	9
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Polytrichum commune	7
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Potentilla erecta	5
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Rhytidiadelphus squarrosus	2
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Sphagnum capillifolium	4
23	266182	602938	U5/U6/M20/M19 (55/35/5/<5)	Vaccinium myrtillus	4
24	266381	602961	U6/M20/M19 (90/5/<5)	Agrostis sp.	7
24	266381	602961	U6/M20/M19 (90/5/<5)	Anthoxanthum odoratum	1
24	266381	602961	U6/M20/M19 (90/5/<5)	Aulcomium palustre	3
24	266381	602961	U6/M20/M19 (90/5/<5)	Festuca ovina	3

Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
24	266381	602961	U6/M20/M19 (90/5/<5)	Galium saxatile	6
24	266381	602961	U6/M20/M19 (90/5/<5)	Hylocomium splendens	2
24	266381	602961	U6/M20/M19 (90/5/<5)	Hypnum jutlandicum	4
24	266381	602961	U6/M20/M19 (90/5/<5)	Juncus squarrosus	2
24	266381	602961	U6/M20/M19 (90/5/<5)	Nardus stricta	8
24	266381	602961	U6/M20/M19 (90/5/<5)	Plagiothecium undulatum	5
24	266381	602961	U6/M20/M19 (90/5/<5)	Polytrichum commune	5
24	266381	602961	U6/M20/M19 (90/5/<5)	Potentilla erecta	4
24	266381	602961	U6/M20/M19 (90/5/<5)	Rhytidiadelphus loreus	5
24	266381	602961	U6/M20/M19 (90/5/<5)	Trichophorum germanicum	5
24	266381	602961	U6/M20/M19 (90/5/<5)	Vaccinium myrtillus	4
25	266858	602865	M19	Agrostis sp.	1
25	266858	602865	M19	Empetrum nigrum	8
25	266858	602865	M19	Eriophorum angustifolium	2
25	266858	602865	M19	Eriophorum vaginatum	5
25	266858	602865	M19	Hypnum jutlandicum	2
25	266858	602865	M19	Plagiothecium undulatum	3
25	266858	602865	M19	Pleurozium schreberi	8
25	266858	602865	M19	Polytrichum commune	2
25	266858	602865	M19	Rhytidiadelphus loreus	2
25	266858	602865	M19	Sphagnum capillifolium	2
25	266858	602865	M19	Vaccinium myrtillus	3
26	266693	602783	U6	Agrostis sp.	1
26	266693	602783	U6	Anthoxanthum odoratum	4
26	266693	602783	U6	Deschampsia flexuosa	4
26	266693	602783	U6	Eriophorum angustifolium	2
26	266693	602783	U6	Galium saxatile	4
26	266693	602783	U6	Juncus squarrosus	2
26	266693	602783	U6	Nardus stricta	2
26	266693	602783	U6	Pleurozium schreberi	4
26	266693	602783	U6	Potentilla erecta	4
26	266693	602783	U6	Rhytidiadelphus loreus	5
26	266693	602783	U6	Rhytidiadelphus squarrosus	7
26	266693	602783	U6	Vaccinium myrtillus	7
27	266738	602748	U4	Agrostis sp.	1

Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
27	266738	602748	U4	Anthoxanthum odoratum	6
27	266738	602748	U4	Deschampsia flexuosa	2
27	266738	602748	U4	Eriophorum angustifolium	2
27	266738	602748	U4	Festuca ovina	4
27	266738	602748	U4	Galium saxatile	8
27	266738	602748	U4	Nardus stricta	1
27	266738	602748	U4	Pleurozium schreberi	3
27	266738	602748	U4	Potentilla erecta	5
27	266738	602748	U4	Rhytidiadelphus loreus	5
27	266738	602748	U4	Rhytidiadelphus squarrosus	9
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Agrostis sp.	2
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Eriophorum angustifolium	1
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Eriophorum vaginatum	6
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Galium saxatile	5
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Hypnum jutlandicum	5
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Juncus squarrosus	3
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Plagiothecium undulatum	6
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Pleurozium schreberi	8
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Polytrichum commune	2
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Potentilla erecta	1
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Rhytidiadelphus loreus	4
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Sphagnum capillifolium	2
28	266549	602915	U5/U6/M20/M19 (55/35/5/<5)	Vaccinium myrtillus	5
29	266445	602882	M20	Agrostis sp.	2
29	266445	602882	M20	Deschampsia flexuosa	1
29	266445	602882	M20	Empetrum nigrum	9

Quadrat	х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
29	266445	602882	M20	Eriophorum vaginatum	8
29	266445	602882	M20	Lichen sp.	3
29	266445	602882	M20	Polytrichum commune	4
29	266445	602882	M20	Polytrichum strictum	2
29	266445	602882	M20	Sphagnum capillifolium	2
29	266445	602882	M20	Sphagnum papillosum	7
29	266445	602882	M20	Sphagnum subnitens	2
29	266445	602882	M20	Vaccinium myrtillus	3
30	265978	603104	M15	Agrostis sp.	2
30	265978	603104	M15	Deschampsia flexuosa	4
30	265978	603104	M15	Galium saxatile	5
30	265978	603104	M15	Hypnum jutlandicum	4
30	265978	603104	M15	Juncus squarrosus	3
30	265978	603104	M15	Nardus stricta	7
30	265978	603104	M15	Polytrichum commune	2
30	265978	603104	M15	Rhytidiadelphus loreus	3
30	265978	603104	M15	Trichophorum cespitosum	9
30	265978	603104	M15	Vaccinium myrtillus	7
31	266387	603347	M19/M3 (80/20)	Agrostis sp.	1
31	266387	603347	M19/M3 (80/20)	Calluna vulgaris	9
31	266387	603347	M19/M3 (80/20)	Eriophorum vaginatum	2
31	266387	603347	M19/M3 (80/20)	Marchantiophyta sp.	5
31	266387	603347	M19/M3 (80/20)	Narthecium ossifragum	7
31	266387	603347	M19/M3 (80/20)	Spagnum sp.	2
31	266387	603347	M19/M3 (80/20)	Trichophorum cespitosum	8
31	266387	603347	M19/M3 (80/20)	Vaccinium myrtillus	1
32	267508	601480	M23/M25 (85/15)	Anthoxanthum odoratum	5
32	267508	601480	M23/M25 (85/15)	Cirsium arvense	1
32	267508	601480	M23/M25 (85/15)	Cynosurus cristatus	3
32	267508	601480	M23/M25 (85/15)	Galium saxatile	3
32	267508	601480	M23/M25 (85/15)	Hylocomium splendens	5
32	267508	601480	M23/M25 (85/15)	Hypnum jutlandicum	4
32	267508	601480	M23/M25 (85/15)	Juncus acutiflorus	8
32	267508	601480	M23/M25 (85/15)	Lathyrus pratensis	3
32	267508	601480	M23/M25 (85/15)	Plantago lanceolata	3

Quadrat	х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
32	267508	601480	M23/M25 (85/15)	Ranunculus acris	3
32	267508	601480	M23/M25 (85/15)	Rhytidiadelphus squarrosus	5
32	267508	601480	M23/M25 (85/15)	Trifolium repens	3
33	267409	601520	U4	Agrostis sp.	7
33	267409	601520	U4	Holcus lanatus	3
33	267409	601520	U4	Cirsium arvense	1
33	267409	601520	U4	Deschampsia cespitosa	4
33	267409	601520	U4	Festuca ovina	5
33	267409	601520	U4	Galium saxatile	4
33	267409	601520	U4	Hypnum jutlandicum	4
33	267409	601520	U4	Nardus stricta	2
33	267409	601520	U4	Plantago lanceolata	3
33	267409	601520	U4	Potentilla erecta	4
33	267409	601520	U4	Rhytidiadelphus squarrosus	6
33	267409	601520	U4	Trifolium repens	4
34	267396	601636	M20	Agrostis sp.	3
34	267396	601636	M20	Eriophorum angustifolium	8
34	267396	601636	M20	Eriophorum vaginatum	2
34	267396	601636	M20	Galium saxatile	5
34	267396	601636	M20	Hylocomium splendens	6
34	267396	601636	M20	Luzula sylvatica	2
34	267396	601636	M20	Nardus stricta	8
34	267396	601636	M20	Pleurozium schreberi	4
34	267396	601636	M20	Rhytidiadelphus loreus	6
34	267396	601636	M20	Rhytidiadelphus squarrosus	2
34	267396	601636	M20	Trichophorum cespitosum	7
34	267396	601636	M20	Vaccinium myrtillus	6
35	267780	601269	M23	Cardamine pratensis	3
35	267780	601269	M23	Rumex acetosa	2
35	267780	601269	M23	Cirsium arvense	1
35	267780	601269	M23	Cirsium palustre	4
35	267780	601269	M23	Filipendula ulmaria	3
35	267780	601269	M23	Hylocomium splendens	4
35	267780	601269	M23	Juncus acutiflorus	10
35	267780	601269	M23	Plantago lanceolata	2

Quadrat	х	Υ	NVC of polygon	Species Latin name	Abundance
ID		22.222			(Domin)
35	267780	601269	M23	Ranunculus acris	3
35	267780	601269	M23	Rhytidiadelphus squarrosus	6
36	267903	601270	U4	Agrostis sp.	4
36	267903	601270	U4	Anthoxanthum odoratum	6
36	267903	601270	U4	Festuca ovina	7
36	267903	601270	U4	Galium saxatile	6
36	267903	601270	U4	Hylocomium splendens	6
36	267903	601270	U4	Hypnum jutlandicum	4
36	267903	601270	U4	Rhytidiadelphus squarrosus	6
36	267903	601270	U4	Thuidium tamariscinum	5
36	267903	601270	U4	Trifolium repens	4
37	267572	601440	U4/MG10 (90/10)	Agrostis sp.	7
37	267572	601440	U4/MG10 (90/10)	Cirsium arvense	1
37	267572	601440	U4/MG10 (90/10)	Cynosurus cristatus	2
37	267572	601440	U4/MG10 (90/10)	Festuca ovina	5
37	267572	601440	U4/MG10 (90/10)	Galium saxatile	4
37	267572	601440	U4/MG10 (90/10)	Hypnum jutlandicum	4
37	267572	601440	U4/MG10 (90/10)	Nardus stricta	2
37	267572	601440	U4/MG10 (90/10)	Potentilla erecta	3
37	267572	601440	U4/MG10 (90/10)	Rhytidiadelphus squarrosus	6
37	267572	601440	U4/MG10 (90/10)	Trifolium repens	4
38	267337	603306	U4/U5 (75/25)	Anthoxanthum odoratum	2
38	267337	603306	U4/U5 (75/25)	Galium saxatile	8
38	267337	603306	U4/U5 (75/25)	Hylocomium splendens	7
38	267337	603306	U4/U5 (75/25)	Juncus squarrosus	1
38	267337	603306	U4/U5 (75/25)	Nardus stricta	2
38	267337	603306	U4/U5 (75/25)	Polytrichum commune	4
38	267337	603306	U4/U5 (75/25)	Potentilla erecta	6
38	267337	603306	U4/U5 (75/25)	Rhytidiadelphus squarrosus	8
39	267281	601618	M20	Agrostis sp.	4
39	267281	601618	M20	Carex echinata	5
39	267281	601618	M20	Eriophorum angustifolium	4
39	267281	601618	M20	Eriophorum vaginatum	4
39	267281	601618	M20	Juncus squarrosus	2
39	267281	601618	M20	Nardus stricta	5

39         267281         601618         M20         Rhytidiadelphus loreus         4           39         267281         601618         M20         Rhytidiadelphus loreus         4           39         267281         601618         M20         Sphagnum capillifolium         7           39         267281         601618         M20         Trichophorum cespitosum         4           40         267145         601590         M20         Agrostis sp.         5           40         267145         601590         M20         Empetrum nigrum         8           40         267145         601590         M20         Eriophorum angustifolium         3           40         267145         601590         M20         Eriophorum angustifolium         3           40         267145         601590         M20         Juncus squarrosus         1           40         267145         601590         M20         Nardus stricta         2           40         267145         601590         M20         Narthecium ossifragum         2           40         267145         601590         M20         Pleurozium schreberi         7           40         267145         601	Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
39         267281         601618         M20         Rhytidiadelphus loreus         4           39         267281         601618         M20         Sphagnum capillifolium         7           39         267281         601618         M20         Trichophorum cespitosum         4           40         267145         601590         M20         Agrostis sp.         5           40         267145         601590         M20         Enlegerum nigrum         8           40         267145         601590         M20         Eriophorum angustifolium         3           40         267145         601590         M20         Eriophorum vaginatum         6           40         267145         601590         M20         Juncus squarrosus         1           40         267145         601590         M20         Nardus stricta         2           40         267145         601590         M20         Narthecium ossifragum         2           40         267145         601590         M20         Pleurozium schreberi         7           40         267145         601590         M20         Spagnum sp.         2           41         266888         601965	ID					(Domin)
39         267281         601618         M20         Sphagnum capillifolium         7           39         267281         601618         M20         Trichophorum cespitosum         4           40         267145         601590         M20         Agrastis sp.         5           40         267145         601590         M20         Empetrum nigrum         8           40         267145         601590         M20         Eriophorum angustifolium         3           40         267145         601590         M20         Eriophorum vaginatum         6           40         267145         601590         M20         Juncus squarrosus         1           40         267145         601590         M20         Nardus stricta         2           40         267145         601590         M20         Narthecium ossifragum         2           40         267145         601590         M20         Pleurozium schreberi         7           40         267145         601590         M20         Spagnum sp.         2           41         266888         601965         U4         Agrostis sp.         7           41         266888         601965         U4 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
39   267281   601618   M20   Trichophorum cespitosum   4						
40         267145         601590         M20         Agrastis sp.         5           40         267145         601590         M20         Calluna vulgaris         7           40         267145         601590         M20         Empetrum nigrum         8           40         267145         601590         M20         Eriophorum vaginatum         6           40         267145         601590         M20         Juncus squarrosus         1           40         267145         601590         M20         Nardus stricta         2           40         267145         601590         M20         Narthecium ossifragum         2           41         266888         601965         U4         Agrastis sp.         7           41         266888         601965         U4         Anthoxanthum odoratum         5           41         266888         601965         U4 <td></td> <td></td> <td></td> <td></td> <td></td> <td>7</td>						7
40   267145   601590   M20   Empetrum nigrum   8	39	267281		M20	Trichophorum cespitosum	
40         267145         601590         M20         Empetrum nigrum         8           40         267145         601590         M20         Eriophorum angustifolium         3           40         267145         601590         M20         Eriophorum vaginatum         6           40         267145         601590         M20         Nardus stricta         2           40         267145         601590         M20         Narthecium ossifragum         2           40         267145         601590         M20         Narthecium ossifragum         2           40         267145         601590         M20         Pleurozium schreberi         7           40         267145         601590         M20         Spagnum sp.         2           41         266888         601965         U4         Agrostis sp.         7           41         266888         601965         U4         Anthoxanthum odoratum         5           41         266888         601965         U4         Hylocomium splendens         8           41         266888         601965         U4         Hylocomium splendens         8           41         266888         601965	40	267145	601590	M20	Agrostis sp.	5
40         267145         601590         M20         Eriophorum angustifolium         3           40         267145         601590         M20         Eriophorum vaginatum         6           40         267145         601590         M20         Nardus stricta         2           40         267145         601590         M20         Narthecium ossifragum         2           40         267145         601590         M20         Pleurozium schreberi         7           40         267145         601590         M20         Spagnum sp.         2           41         266888         601965         U4         Agrostis sp.         7           41         266888         601965         U4         Anthoxanthum odoratum         5           41         266888         601965         U4         Hylocomium splendens         8           41         266888         601965 <t< td=""><td>40</td><td>267145</td><td>601590</td><td>M20</td><td>Calluna vulgaris</td><td>7</td></t<>	40	267145	601590	M20	Calluna vulgaris	7
40   267145   601590   M20   Eriophorum vaginatum   6	40	267145	601590	M20	Empetrum nigrum	8
40         267145         601590         M20         Juncus squarrosus         1           40         267145         601590         M20         Narthecium ossifragum         2           40         267145         601590         M20         Pleurozium schreberi         7           40         267145         601590         M20         Spagnum sp.         2           41         266888         601965         U4         Agrostis sp.         7           41         266888         601965         U4         Anthoxanthum odoratum         5           41         266888         601965         U4         Anthoxanthum odoratum         5           41         266888         601965         U4         Anthoxanthum odoratum         5           41         266888         601965         U4         Hylocomium splendens         8           41         266888         601965         U4         Hypnum jutlandicum         7           41         266888         601965         U4         Pleurozium schreberi         4           41         266888         601965         U4         Potentilla erecta         4           41         266888         601965         U4 </td <td>40</td> <td>267145</td> <td>601590</td> <td>M20</td> <td>Eriophorum angustifolium</td> <td>3</td>	40	267145	601590	M20	Eriophorum angustifolium	3
40       267145       601590       M20       Nardus stricta       2         40       267145       601590       M20       Pleurozium schreberi       7         40       267145       601590       M20       Spagnum sp.       2         41       266888       601965       U4       Agrostis sp.       7         41       266888       601965       U4       Anthoxanthum odoratum       5         41       266888       601965       U4       Hylocomium splendens       8         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not N	40	267145	601590	M20	Eriophorum vaginatum	6
40       267145       601590       M20       Narthecium ossifragum       2         40       267145       601590       M20       Pleurozium schreberi       7         40       267145       601590       M20       Spagnum sp.       2         41       266888       601965       U4       Agrostis sp.       7         41       266888       601965       U4       Anthoxanthum odoratum       5         41       266888       601965       U4       Hylocomium splendens       8         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607	40	267145	601590	M20	Juncus squarrosus	1
40       267145       601590       M20       Pleurozium schreberi       7         40       267145       601590       M20       Spagnum sp.       2         41       266888       601965       U4       Agrostis sp.       7         41       266888       601965       U4       Anthoxanthum odoratum       5         41       266888       601965       U4       Hylocomium splendens       8         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607	40	267145	601590	M20	Nardus stricta	2
40       267145       601590       M20       Spagnum sp.       2         41       266888       601965       U4       Agrostis sp.       7         41       266888       601965       U4       Anthoxanthum odoratum       5         41       266888       601965       U4       Hylocomium splendens       8         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607	40	267145	601590	M20	Narthecium ossifragum	2
41       266888       601965       U4       Agrostis sp.       7         41       266888       601965       U4       Anthoxanthum odoratum       5         41       266888       601965       U4       Hylocomium splendens       8         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607	40	267145	601590	M20	Pleurozium schreberi	7
41       266888       601965       U4       Anthoxanthum odoratum       5         41       266888       601965       U4       Galium saxatile       8         41       266888       601965       U4       Hylocomium splendens       8         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281	40	267145	601590	M20	Spagnum sp.	2
41       266888       601965       U4       Galium saxatile       8         41       266888       601965       U4       Hylocomium splendens       8         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Pestuca ovina       5         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281	41	266888	601965	U4	Agrostis sp.	7
41       266888       601965       U4       Hylocomium splendens       8         41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281<	41	266888	601965	U4	Anthoxanthum odoratum	5
41       266888       601965       U4       Hypnum jutlandicum       7         41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	41	266888	601965	U4	Galium saxatile	8
41       266888       601965       U4       Pleurozium schreberi       4         41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	41	266888	601965	U4	Hylocomium splendens	8
41       266888       601965       U4       Potentilla erecta       4         41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	41	266888	601965	U4	Hypnum jutlandicum	7
41       266888       601965       U4       Rhytidiadelphus loreus       7         42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	41	266888	601965	U4	Pleurozium schreberi	4
42       274281       598607       Not NVC       Blechnum spicant       2         42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	41	266888	601965	U4	Potentilla erecta	4
42       274281       598607       Not NVC       Calluna vulgaris       8         42       274281       598607       Not NVC       Cladonia spp       2         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	41	266888	601965	U4	Rhytidiadelphus loreus	7
42       274281       598607       Not NVC       Cladonia spp       2         42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	42	274281	598607	Not NVC	Blechnum spicant	2
42       274281       598607       Not NVC       Deschampsia flexuosa       4         42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	42	274281	598607	Not NVC	Calluna vulgaris	8
42       274281       598607       Not NVC       Dicranum scoropodium       3         42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	42	274281	598607	Not NVC	Cladonia spp	2
42       274281       598607       Not NVC       Dryopteris filix-mas       2         42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	42	274281	598607	Not NVC	Deschampsia flexuosa	4
42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	42	274281	598607	Not NVC	Dicranum scoropodium	3
42       274281       598607       Not NVC       Dryopteris spp       2         42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	42	274281	598607	Not NVC	Dryopteris filix-mas	2
42       274281       598607       Not NVC       Festuca ovina       5         42       274281       598607       Not NVC       Galium saxatile       6         42       274281       598607       Not NVC       Hypnum jutlandicum       7         42       274281       598607       Not NVC       Luzula campestris       2	42	274281	598607	Not NVC	Dryopteris spp	2
42         274281         598607         Not NVC         Hypnum jutlandicum         7           42         274281         598607         Not NVC         Luzula campestris         2	42	274281	598607	Not NVC		5
42 274281 598607 Not NVC Luzula campestris 2	42	274281	598607	Not NVC	Galium saxatile	6
42 274281 598607 Not NVC Luzula campestris 2	42	274281	598607	Not NVC	Hypnum jutlandicum	7
· · ·	42					2
+2   2/4201   JJ000/   NOLINYC   FICUIUZIUIII SCIII CDCII   4	42	274281	598607	Not NVC	Pleurozium schreberi	4
42 274281 598607 Not NVC <i>Poa trivialis</i> 6						

Quadrat	Х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
42	274281	598607	Not NVC	Polytricum commune	3
42	274281	598607	Not NVC	Potentilla erecta	3
42	274281	598607	Not NVC	Rubus idaeus	3
42	274281	598607	Not NVC	Vaccinium myrtillus	3
43	274278	598585	Not NVC	Angelica sylvatica	2
43	274278	598585	Not NVC	Chamaenerion angutifolium	6
43	274278	598585	Not NVC	Cirsium palustre	2
43	274278	598585	Not NVC	Deschampsia cespitosa	4
43	274278	598585	Not NVC	Digitalis purpurea	2
43	274278	598585	Not NVC	Hypnum jutlandicum	7
43	274278	598585	Not NVC	Juncus effusus	10
43	274278	598585	Not NVC	Picea sitchensis	3
43	274278	598585	Not NVC	Polytricum commune	3
43	274278	598585	Not NVC	Pseudoscleropodium purum	2
43	274278	598585	Not NVC	Rhytidiadelphus loreus	2
43	274278	598585	Not NVC	Rubus idaeus	3
43	274278	598585	Not NVC	Salix cinerea	3
43	274278	598585	Not NVC	Spagnum fimbriatum	2
44	274122	598803	Not NVC	Ajuga reptans	4
44	274122	598803	Not NVC	Angelica sylvatica	4
44	274122	598803	Not NVC	Carex panicea	4
44	274122	598803	Not NVC	Cirsium palustre	4
44	274122	598803	Not NVC	Deschampsia cespitosa	6
44	274122	598803	Not NVC	Epilobium palustre	3
44	274122	598803	Not NVC	Erica tetralix	3
44	274122	598803	Not NVC	Galium saxatile	6
44	274122	598803	Not NVC	Hippuris vulgaris	2
44	274122	598803	Not NVC	Molinia caerulea	4
44	274122	598803	Not NVC	Narthecium ossifragum	8
44	274122	598803	Not NVC	Pleurozium schreberi	4
44	274122	598803	Not NVC	Potentilla erecta	3
44	274122	598803	Not NVC	Pseudoscleropodium purum	7
44	274122	598803	Not NVC	Spagnum papillosum	4

Quadrat	Х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
44	274122	598803	Not NVC	Succisa pratensis	3
44	274122	598803	Not NVC	Viola palustris	3
45	273071	599463	U4	Agrostis tenuis	6
45	273071	599463	U4	Deschampsia cespitosa	2
45	273071	599463	U4	Deschampsia flexuosa	4
45	273071	599463	U4	Galium saxatile	3
45	273071	599463	U4	Holcus lanatus	4
45	273071	599463	U4	Juncus acutiflorus	4
45	273071	599463	U4	Molinia caerulea	10
45	273071	599463	U4	Pesudoscleropodium purum	4
45	273071	599463	U4	Pleurozium schreberi	4
45	273071	599463	U4	Potentilla erecta	4
45	273071	599463	U4	Rhytidiadelphus squarrosus	6
46	273229	599545	M25	Agrostis spp	4
46	273229	599545	M25	Caex echinata	3
46	273229	599545	M25	Calluna vulgaris	2
46	273229	599545	M25	Deschampsia flexuosa	6
46	273229	599545	M25	Galium saxatile	6
46	273229	599545	M25	Juncus squarrosus	5
46	273229	599545	M25	Molinia caerulea	7
46	273229	599545	M25	Nardus stricta	5
46	273229	599545	M25	Picea sitchensis	1
46	273229	599545	M25	Plagiothecium undulatum	4
46	273229	599545	M25	Pleurozium schreberi	6
46	273229	599545	M25	Potentilla erecta	5
46	273229	599545	M25	Rhytidiadelphus squarrosus	6
46	273229	599545	M25	Trichophorum germanicum	6
46	273229	599545	M25	Vaccinium myrtillus	5
47	273058	599942	H18	Aulacomnium palustre	2
47	273058	599942	H18	Deschampsia flexuosa	5
47	273058	599942	H18	Erica tetralix	4
47	273058	599942	H18	Galium saxatile	6
47	273058	599942	H18	Juncus squarrosus	3
47	273058	599942	H18	Molinia caerulea	6

Quadrat	Х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
47	273058	599942	H18	Nardus stricta	4
47	273058	599942	H18	Pleurozium schreberi	5
47	273058	599942	H18	Pleurozium schreberi	8
47	273058	599942	H18	Poa trivialis	4
47	273058	599942	H18	Polytricum commune	6
47	273058	599942	H18	Rhytidiadelphus squarrosus	6
47	273058	599942	H18	Spagnum capillifolium	3
47	273058	599942	H18	Vaccinium myrtillus	9
48	272751	600019	M17	Calluna vulgaris	9
48	272751	600019	M17	Cladonia spp	р
48	272751	600019	M17	Deschampsia flexuosa	5
48	272751	600019	M17	Empetrum nigrum	7
48	272751	600019	M17	Erica tetralix	р
48	272751	600019	M17	Eriophorum vaginatum	7
48	272751	600019	M17	Galium saxatile	3
48	272751	600019	M17	Gymnocolea inflata	3
48	272751	600019	M17	Hylocomium splendens	р
48	272751	600019	M17	Nardus stricta	3
48	272751	600019	M17	Pleurozium schreberi	7
48	272751	600019	M17	Rhytidiadelphus loreus	3
48	272751	600019	M17	Spagnum capillifolium	6
48	272751	600019	M17	Trichophorum germanicum	5
48	272751	600019	M17	Vaccinium myrtillus	5
48	272751	600019	M17	Vaccinium vitis-idaea	3
49	269906	599033	M20	Anthoxanthum odoratum	3
49	269906	599033	M20	Aulacomnium palustre	4
49	269906	599033	M20	Calluna vulgaris	3
49	269906	599033	M20	Deschampsia flexuosa	8
49	269906	599033	M20	Eriophorum vaginatum	10
49	269906	599033	M20	Galium saxatile	2
49	269906	599033	M20	Hypnum jutlandicum	5
49	269906	599033	M20	Juncus squarrosus	4
49	269906	599033	M20	Pleurozium schreberi	6
49	269906	599033	M20	Rhytidiadelphus loreus	5
49	269906	599033	M20	Spagnum capillifolium	2

Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
49	269906	599033	M20	Vaccinium myrtillus	6
50	270094	599021	U6	Agrostis spp	4
50	270094	599021	U6	Anthoxanthum odoratum	4
50	270094	599021	U6	Deschampsia flexuosa	6
50	270094	599021	U6	Dicranum scoropodium	р
50	270094	599021	U6	Eriophorum angustifolium	4
50	270094	599021	U6	Eriophorum vaginatum	5
50	270094	599021	U6	Festuca ovina	4
50	270094	599021	U6	Festuca vivipara	4
50	270094	599021	U6	Galium saxatile	5
50	270094	599021	U6	Hylocomium splendens	5
50	270094	599021	U6	Juncus squarrosus	3
50	270094	599021	U6	Plagiothecium undulatum	3
50	270094	599021	U6	Pleurozium schreberi	7
50	270094	599021	U6	Polytricum commune	6
50	270094	599021	U6	Rhytidiadelphus squarrosus	7
50	270094	599021	U6	Spagnum capillifolium	р
50	270094	599021	U6	Vaccinium myrtillus	3
51	271586	598928	M20	Agrostis vinealis	6
51	271586	598928	M20	Deschampsia flexuosa	4
51	271586	598928	M20	Eriophorum vaginatum	10
51	271586	598928	M20	Galium saxatile	7
51	271586	598928	M20	Hylocomium palustre	5
51	271586	598928	M20	Juncus squarrosus	4
51	271586	598928	M20	Pleurozium schreberi	4
51	271586	598928	M20	Polytricum commune	8
51	271586	598928	M20	Pseudoscleropodium purum	4
51	271586	598928	M20	Rhytidiadelphus squarrosus	5
51	271586	598928	M20	Spagnum capillifolium	8
51	271586	598928	M20	Vaccinium myrtillus	4
52	271646	598861	U6	Agrostis vinealis	8
52	271646	598861	U6	Anthoxanthum odoratum	3
52	271646	598861	U6	Deschampsia flexuosa	4
52	271646	598861	U6	Festuca vivipara	2

Quadrat	Х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
52	271646	598861	U6	Galium saxatile	6
52	271646	598861	U6	Hylocomium splendens	7
52	271646	598861	U6	Juncus squarrosus	8
52	271646	598861	U6	Pleurozium schreberi	3
52	271646	598861	U6	Polytricum commune	8
52	271646	598861	U6	Rhytidiadelphus loreus	6
52	271646	598861	U6	Vaccinium myrtillus	7
53	268836	602887	H18	Agrostis spp	5
53	268836	602887	H18	Anthoxanthum odoratum	4
53	268836	602887	H18	Deschampsia flexuosa	5
53	268836	602887	H18	Eriophorum angustifolium	р
53	268836	602887	H18	Festuca vivipara	2
53	268836	602887	H18	Galium saxatile	5
53	268836	602887	H18	Holcus mollis	р
53	268836	602887	H18	Luzula sylvatica	р
53	268836	602887	H18	Molinia caerulea	р
53	268836	602887	H18	Pesudoscleropodium purum	4
53	268836	602887	H18	Potentilla erecta	р
53	268836	602887	H18	Rhytidiadelphus loreus	9
54	268815	603015	M19	Aulacomnium palustre	p4
54	268815	603015	M19	Calluna vulgaris	4
54	268815	603015	M19	Cladonia portentosa	2
54	268815	603015	M19	Cladonia uncialis	2
54	268815	603015	M19	Deschampsia flexuosa	4
54	268815	603015	M19	Empetrum nigrum	5
54	268815	603015	M19	Eriophorum angustifolium	3
54	268815	603015	M19	Eriophorum vaginatum	6
54	268815	603015	M19	Hylocomium splendens	р
54	268815	603015	M19	Narthecium ossifragum	р
54	268815	603015	M19	Pleurozium schreberi	5
54	268815	603015	M19	Polytricum commune	5
54	268815	603015	M19	Racomitrium lanuginosum	5
54	268815	603015	M19	Rhytidiadelphus loreus	5
54	268815	603015	M19	Spagnum capillifolium	6

Quadrat	Х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
54	268815	603015	M19	Spagnum compactum	4
54	268815	603015	M19	Spagnum fallax	р
54	268815	603015	M19	Spagnum papillosum	р
54	268815	603015	M19	Spagnum papillosum	р
54	268815	603015	M19	Vaccinium myrtillus	4
55	268805	603069	M19	Aulacomnium palustre	4
55	268805	603069	M19	Eriophorum angustifolium	5
55	268805	603069	M19	Glyceria fluitans	3
55	268805	603069	M19	Juncus bulbosus	6
55	268805	603069	M19	Narthecium ossifragum	3
55	268805	603069	M19	Spagnum capillifolium	4
55	268805	603069	M19	Spagnum cuspidatum	8
55	268805	603069	M19	Spagnum fallax	5
55	268805	603069	M19	Spagnum papillosum	5
56	268425	603127	M23	Agrostis stolonifera	р
56	268425	603127	M23	Ajuga reptans	р
56	268425	603127	M23	Angelica sylvatica	3
56	268425	603127	M23	Cardamine pratensis	3
56	268425	603127	M23	Carex echinata	р
56	268425	603127	M23	Chrysosplenium oppositifolium	р
56	268425	603127	M23	Cirsium palustre	5
56	268425	603127	M23	Epilobium montanum	3
56	268425	603127	M23	Epilobium palustre	р
56	268425	603127	M23	Galium palustre	р
56	268425	603127	M23	Galium saxatile	3
56	268425	603127	M23	Gymnocolea inflata	5
56	268425	603127	M23	Holcus lanatus	5
56	268425	603127	M23	Holcus mollis	5
56	268425	603127	M23	Hylocomium splendens	4
56	268425	603127	M23	Hypnum jutlandicum	4
56	268425	603127	M23	Juncus acutiflorus	10
56	268425	603127	M23	Juncus effusus	р
56	268425	603127	M23	Lysimachia nemorum	р
56	268425	603127	M23	Montia fontana	р

Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
56	268425	603127	M23	Potentilla erecta	3
56	268425	603127	M23	Pseudoscleropodium purum	4
56	268425	603127	M23	Ranunculus acris	р
56	268425	603127	M23	Ranunculus flammula	р
56	268425	603127	M23	Ranunculus repens	6
56	268425	603127	M23	Rhytidiadelphus squarrosus	7
56	268425	603127	M23	Rumex acetosa	5
56	268425	603127	M23	Stellaria spp	р
56	268425	603127	M23	Succisa pratensis	р
56	268425	603127	M23	Viola palustris	4
57	268866	602257	M25	Agrostis spp	3
57	268866	602257	M25	Angelica sylvatica	5
57	268866	602257	M25	Aulacomnium palustre	2
57	268866	602257	M25	Carex disticha	р
57	268866	602257	M25	Carex echinata	р
57	268866	602257	M25	Cirsium palustre	5
57	268866	602257	M25	Deschampsia cespitosa	5
57	268866	602257	M25	Deschampsia flexuosa	р
57	268866	602257	M25	Epilobium palustre	3
57	268866	602257	M25	Erica tetralix	р
57	268866	602257	M25	Eriophorum vaginatum	3
57	268866	602257	M25	Festuca vivipara	р
57	268866	602257	M25	Galium saxatile	3
57	268866	602257	M25	Hylocomium splendens	р
57	268866	602257	M25	Juncus acutiflorus	6
57	268866	602257	M25	Molinia caerulea	9
57	268866	602257	M25	Narthecium ossifragum	р
57	268866	602257	M25	Pesudoscleropodium purum	р
57	268866	602257	M25	Pleurozium schreberi	4
57	268866	602257	M25	Polytricum commune	5
57	268866	602257	M25	Potentilla erecta	4
57	268866	602257	M25	Rhytidiadelphus loreus	4
57	268866	602257	M25	Rumex acetosa	4
57	268866	602257	M25	Spagnum capillifolium	р

Quadrat	Х	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
57	268866	602257	M25	Spagnum fallax	5
57	268866	602257	M25	Spagnum fimbriatum	р
57	268866	602257	M25	Spagnum tenellium	р
57	268866	602257	M25	Stachys palustris	р
57	268866	602257	M25	Succisa pratensis	р
57	268866	602257	M25	Trichophorum germanicum	р
58	267443	604693	M23/ M25	Agrostis capillaris	8
58	267443	604693	M23/ M25	Anthoxanthum odoratum	5
58	267443	604693	M23/ M25	Cirsium palustre	3
58	267443	604693	M23/ M25	Deschampsia cespitosa	4
58	267443	604693	M23/ M25	festuca ovina	р
58	267443	604693	M23/ M25	Galium saxatile	6
58	267443	604693	M23/ M25	Holcus lanatus	4
58	267443	604693	M23/ M25	Hylocomium splendens	6
58	267443	604693	M23/ M25	Juncus effusus	4
58	267443	604693	M23/ M25	Nardus stricta	2
58	267443	604693	M23/ M25	Pseudoscleropodium purum	7
58	267443	604693	M23/ M25	Rhytidiadelphus squarrosus	5
58	267443	604693	M23/ M25	Viola palustris	3
59	267447	604675	M23/ M25	Agrostis capillaris	4
59	267447	604675	M23/ M25	Carex panicea	6
59	267447	604675	M23/ M25	Deschampsia flexuosa	4
59	267447	604675	M23/ M25	Galium saxatile	4
59	267447	604675	M23/ M25	Holcus lanatus	5
59	267447	604675	M23/ M25	Hylocomium splendens	3
59	267447	604675	M23/ M25	Juncus effusus	р
59	267447	604675	M23/ M25	Pleurozium schreberi	4
59	267447	604675	M23/ M25	Polytricum commune	6
59	267447	604675	M23/ M25	Potentilla erecta	5
59	267447	604675	M23/ M25	Rhytidiadelphus squarrosus	4
59	267447	604675	M23/ M25	Spagnum capillifolium	р
59	267447	604675	M23/ M25	Spagnum fallax	8
59	267447	604675	M23/ M25	Spagnum fimbriatum	3
H1	265405	608009	U5c	Molinia caerulea	3

Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
H1	265405	608009	U5c	Luzula multiflora	3
H1	265405	608009	U5c	Narthecium ossifragum	3
H1	265405	608009	U5c	Tricophorum cespitosum	3
H1	265405	608009	U5c	Dactylorhiza maculata	3
H1	265405	608009	U5c	Anthoxanthum odoratum	3
H1	265405	608009	U5c	Viola riviana	3
H1	265405	608009	U5c	Calluna vulgaris	4
H1	265405	608009	U5c	Potentilla erecta	4
H1	265405	608009	U5c	Carex panicea	4
H1	265405	608009	U5c	Rhytiadelphus squarrosus	4
H1	265405	608009	U5c	Juncus squarrosus	5
H1	265405	608009	U5c	Sphagnum capillifolium	5
H1	265405	608009	U5c	Nardus stricta	9
H2	265343	608017	M32b	Philonotis fontana	8
H2	265343	608017	M32b	Saxifraga stellaris	5
H2	265343	608017	M32b	Stellaria alsine	4
H2	265343	608017	M32b	Ranunculus flammula	4
H2	265343	608017	M32b	Glyceria fluitans	4
H2	265343	608017	M32b	Eriophorum angustifolium	4
H2	265343	608017	M32b	Anthoxanthum odoratum	4
H2	265343	608017	M32b	Ranunculus omiophyllus	3
H3	265322	608112	M10	Tricophorum cespitosum	6
Н3	265322	608112	M10	Eriophorum angustifolium	5
H3	265322	608112	M10	Pinguicula vulgaris	5
Н3	265322	608112	M10	Carex dioica	5
Н3	265322	608112	M10	Scorpioides scorpidium	4
H3	265322	608112	M10	Carex viridula subsp. oedocarpa	4
Н3	265322	608112	M10	Bryum pseudotriquetrum	4
Н3	265322	608112	M10	Scorpidium cossini	4
H3	265322	608112	M10	Saxifraga stellaris	4
H3	265322	608112	M10	Narthecium ossifragum	4
Н3	265322	608112	M10	Carex panicea	4
Н3	265322	608112	M10	Carex nigra	4
Н3	265322	608112	M10	Carex hostiana	4

Quadrat	X	Υ	NVC of polygon	Species Latin name	Abundance
ID					(Domin)
H3	265322	608112	M10	Carex flacca	4
H3	265322	608112	M10	Cardamine pratensis	4
H3	265322	608112	M10	Stellaria alsine	3
H3	265322	608112	M10	Triglochin palustre	3
H4	265332	608175	M18	Sphagnum papillosum	8
H4	265332	608175	M18	Sphagnum megallanicum	6
H4	265332	608175	M18	Eriophorum vaginatum	5
H4	265332	608175	M18	Tricophorum cespitosum	4
H4	265332	608175	M18	Eriophorum angustifolium	4
H4	265332	608175	M18	Erica tetralix	4
H4	265332	608175	M18	Calluna vulgaris	4
H4	265332	608175	M18	Empetrum nigrum	3
H5	265546	607531	U5c	Carex panicea	6
H5	265546	607531	U5c	Hylocomium splendens	6
H5	265546	607531	U5c	Carex pulicaris	6
H5	265546	607531	U5c	Nardus stricta	5
H5	265546	607531	U5c	Potentilla erecta	4
H5	265546	607531	U5c	Plantago lanceolata	4
H5	265546	607531	U5c	Arrhenatherum elatius	4
H5	265546	607531	U5c	Rhytiadelphus squarrosus	4
H5	265546	607531	U5c	Ranunculus acris	4
H5	265546	607531	U5c	Juncus squarrosus	4
H5	265546	607531	U5c	Viola riviana	3
H5	265546	607531	U5c	Trifolium repens	3
H5	265546	607531	U5c	Selaginella selaginoides	3
H5	265546	607531	U5c	Polygala serpyllifolia	3
H5	265546	607531	U5c	Galium uliginosum	3
H5	265546	607531	U5c	Climacium dendroides	3
H5	265546	607531	U5c	Cerastium fontanum	3
H6	265314	606362	CG10a	Pilosella officinarum	6
H6	265314	606362	CG10a	Agrostis capillaris	6
H6	265314	606362	CG10a	Thymus polytrichus	5
H6	265314	606362	CG10a	Hylocomium splendens	5
Н6	265314	606362	CG10a	Festuca ovina	5
H6	265314	606362	CG10a	Arrhenatherum elatius	5

Quadrat ID	Х	Υ	NVC of polygon	Species Latin name	Abundance (Domin)
Н6	265314	606362	CG10a	Galium saxatile	4
H6	265314	606362	CG10a	Luzula multiflora	3
H7	265303	607107	M31	Anthelia julacea	7
H7	265303	607107	M31	Sphagnum denticulatum	6
H7	265303	607107	M31	Narthecium ossifragum	5
H7	265303	607107	M31	Tricophorum cespitosum	5
H7	265303	607107	M31	Marsupellia emarginata	4
H7	265303	607107	M31	Pohlia ludwigii (uncertain i.d.)	4
H7	265303	607107	M31	Eriophorum angustifolium	4
H7	265303	607107	M31	Rhacometrium laguninosum	3
H7	265303	607107	M31	Erica tetralix	3
EQ1	270999	598922	U5	Juncus squarrosus	3
EQ1	270999	598922	U5	Anthoxanthum odoratum	3
EQ1	270999	598922	U5	Festuca ovina	3
EQ1	270999	598922	U5	Molinia caerulea	4
EQ1	270999	598922	U5	Tricophorum cespitosum	4
EQ1	270999	598922	U5	Potentilla erecta	4
EQ1	270999	598922	U5	Hypnum jutlandicum	4
EQ1	270999	598922	U5	Vaccinium myrtilus	5
EQ1	270999	598922	U5	Hylocomnium splendens	5
EQ1	270999	598922	U5	Deschampsia flexuosa	5
EQ1	270999	598922	U5	Galium saxatile	6
EQ1	270999	598922	U5	Rhytiadelphus squarrosus	8
EQ1	270999	598922	U5	Nardus stricta	8
EQ2	271013	598908	U6	Festuca ovina	3
EQ2	271013	598908	U6	Agrostis capillaris	3
EQ2	271013	598908	U6	Nardus stricta	4
EQ2	271013	598908	U6	Deschampsia flexuosa	4
EQ2	271013	598908	U6	Galium saxatile	5
EQ2	271013	598908	U6	Rhytiadelphus squarrosus	5
EQ2	271013	598908	U6	Juncus squarrosus	9
EQ3	270833	598867	M20- acid grassland	Potentilla erecta	3
EQ3	270833	598867	M20- acid grassland	Nardus stricta	4
EQ3	270833	598867	M20- acid grassland	Festuca ovina	4

Quadrat ID	Х	Υ	NVC of polygon	Species Latin name	Abundance (Domin)
EQ3	270833	598867	M20- acid grassland	Agrostis capillaris	4
EQ3	270833	598867	M20- acid grassland	Pleurozium schreberei	4
EQ3	270833	598867	M20- acid grassland	Deschampsia flexuosa	5
EQ3	270833	598867	M20- acid grassland	Juncus squarrosus	5
EQ3	270833	598867	M20- acid grassland	Galium saxatile	5
EQ3	270833	598867	M20- acid grassland	Rhytiadelphus squarrosus	6
EQ3	270833	598867	M20- acid grassland	Eriophorum vaginatum	7
EQ3	270833	598867	M20- acid grassland	Polytrichum formosum	7
EQ4	268438	601934	M23	Valeriana officinalis	3
EQ4	268438	601934	M23	Cardamine pratensis	3
EQ4	268438	601934	M23	Holcus mollis	3
EQ4	268438	601934	M23	Angelica sylvestris	4
EQ4	268438	601934	M23	Cirsium palustre	4
EQ4	268438	601934	M23	Holcus lanatus	4
EQ4	268438	601934	M23	Galium palustre	4
EQ4	268438	601934	M23	Kindberga praelonga	4
EQ4	268438	601934	M23	Rumex acetosa	5
EQ4	268438	601934	M23	Stellaria alsine	5
EQ4	268438	601934	M23	B.rutubutum	6
EQ4	268438	601934	M23	Ranunculus repens	7
EQ4	268438	601934	M23	Juncus effusus	8
EQ5	266437	603420	H18	Vaccinium myrtilus	4
EQ5	266437	603420	H18	Galium saxatile	4
EQ5	266437	603420	H18	Polytrichum formosum	4
EQ5	266437	603420	H18	Vaccinium vitis-idae	4
EQ5	266437	603420	H18	Rhytiadelphus loreus	4
EQ5	266437	603420	H18	Deschampsia flexuosa	5
EQ5	266437	603420	H18	Eriophorum vaginatum	5
EQ5	266437	603420	H18	Empetrum nigrum	5
EQ5	266437	603420	H18	Calluna vulgaris	5
EQ5	266437	603420	H18	Hylocomnium splendens	6
EQ5	266437	603420	H18	Pleurozium schreberei	7
EQ6	266426	603646	S9a	Epilobium montanum	3
EQ6	266426	603646	S9a	Myosotis secunda	3
EQ6	266426	603646	S9a	Ranunculus omiophyllu	3

Quadrat ID	Х	Υ	NVC of polygon	Species Latin name	Abundance (Domin)
EQ6	266426	603646	S9a	Stellaria alsine	3
EQ6	266426	603646	S9a	Epilobium palustre	4
EQ6	266426	603646	S9a	Montian fontana	4
EQ6	266426	603646	S9a	Juncus effusus	4
EQ6	266426	603646	S9a	Cardamine pratensis	4
EQ6	266426	603646	S9a	Volia palustris	4
EQ6	266426	603646	S9a	Rumex acetosa	5
EQ6	266426	603646	S9a	Carex rostrata	9

**Table A2-3: NVC Target Notes** 

Target	Easting	Northing	Description (See <b>Appendix 03</b> ) for full species names.
note			
number			
P1	271004	598894	Deeper peat (>0.5 m); U5b/M20 transitional with <i>E.vaginatum</i> frequent and <i>Polytrichum</i> abundant.
P2	270940	598896	M15 (intergrade to M25a). Peat 0.1 m. Small patches where N.ossifragum/ T.cespitosum abundant. Molinia frequent.
Р3	270833	598867	Quadrat for relict blanket bog; M20-acid grass intergrade.
P4	270851	598860	Juncus dominant but NOT a flush-line (non GWDTE). A very small amount <i>S. fallax</i> within drain/erosion channel. <i>Juncus effusus</i> & <i>Molinia</i> dominant
P5	270607	599033	H12. Small area. Calluna / Vaccinium co-dominant
P6	269501	599015	C.nigra sward associated with dry drainage channel. No Sphagnum.
P7	268425	601994	Upper reaches of rush pasture M6 acid flush; with sheets of S.palustre.
P8	267525	603509	M6 habitat; associated with drainage. Basically <i>J.effusus/ S.fallax</i> confined in-drainage but some diversity in associates (e.g. C.nigra variant spreading out from confines of drain): <i>J.effusus, C.nigra, Cardamine flexuosa, C.pratensis, C.oppositofolium, Epilobium palustre</i> .
TN1	265995	610005	M3: Bog pool. <i>S.fallax</i> dominant. Edge dominated by <i>E.angustifolium</i> but not on bare peat.
TN2	265525	607537	M23: Small area clearly neutral rush pasture. Very sedge rich sward in places ( <i>C.panacea &amp; C.pulicaris</i> ). Clearly some enrichment; a walk up-burn reviled no sign of base-rich flush however some GW input from upslope assumed: <i>J.effusus/R.acetosa/C.nigra /A.odoratum dominant</i> .
TN3	265525	607537	Below TN2; highly flushed U5 grassland (U5c); see quadrat H5
TN5	265525	607537	M32 spring; adjacent to TN3. Species-poor, bryophyte dominated by <i>P.fontana, B.pseudotriquetrum</i> , with <i>S.cossinii</i> the most abundant moss. Hard grazed <i>C.flacca, C.nigra and C.pratensis</i> associated.
TN6	265565	607226	M32; polygon H75. M32 community in very good condition here: Carexrich (esp <i>C.viridula ssp oedocarpa</i> ) with <i>S.stellaria</i> abundant, and <i>Pinguicula present</i> .
TN7	265543	607185	M32/M4/ M6; Highly flushed area where springs emerge and drainage channels (with M32 community) coalesce. Mix of acid flush (sheets of <i>S.palustre with Carex/Juncus</i> ) and fairly extensive patches of M32 in close mosaic. Mapped as contiguous with polygon H75. Grid ref given is springhead where M32 emerges (intact and good condition; extensive) but note also drainage arriving from SSW also contains bryophytes typical of M32 (esp. <i>D.palustre</i> ). Downstream of spring a complex mosaic of acid flush, with abundant <i>C.rostrata</i> (M4; not typical – as bogbean/marsh cinquefoil

Target	Easting	Northing	Description (See <b>Appendix 03</b> ) for full species names.
note number			
			and mesotrophic spp. absent). Also areas of U5c with sedge-rich sward ( <i>C.pulicaris, C.panacea</i> , also <i>Plantago lanceolata</i> - similar to TN3)
TN8	265563	607194	M32 spring-head
TN9	265553	607136	Rivulet emerging from flush system - mild base richness; <i>C.viridula</i> and <i>C.panacea</i> abundant, <i>C.echinata</i> frequent.
TN10	265450	607099	M32 spring-head emerges at grid ref. Bryophytes dominated by C.cuspidata & P.fontana. No S.stellata. Herbs C.pratensis/R.acetosa/V.palustre/Triglochin palustre. Few Carex - much A.stolonifera/L.multiflora/P.lanceolata.
TN11	265439	606962	M6 acid flush is dominant habitat associated with watercourse. Carex-rich (M6a) but with broad range of sedges; mainly <i>C.nigra</i> but also stands of <i>C.rostrata, C.panacea</i> . Much <i>C.viridula</i> in-channel. <i>S.denticulatum</i> particularly abundant.
TN12	265440	607017	M10; not typical (closed sward and no Pinguicula seen but <i>C.dioica/viridula/panacea</i> dominant with <i>C.hostian</i> occasional. <i>S.denticulatum</i> abundant. This tributary shows signs of base enrichment within generally acidic flush; probable GW input upstream.
TN13	265382	670451	Head of tributary: acid flush, mainly <i>S.fallax</i> with <i>C.nigra/C.rostrata</i> . <i>Narthecium/E.angustifolium</i> very abundant throughout. In channel there are small patches of M10 with <i>Pinguicula</i> and short sedge. Further downstream, areas of M6 with abundant <i>S.palustre &amp; C.echinata</i> (M6a). Essentially acid flush associated with watercourse, some limited signs of base enrichment. Later in survey a network of base-rich flush found to feed-in to this area from up slope (see Polygons H102, H103 and associated TNs)
TN14	265484	670000	M10: Pinguicula/C.viridula/C.dioica/C.panacea/mainly over S.denticulatum but also some S.scorpioides. Crepis paludosa is occasional. This M10 community flanks the burn for considerable distance downstream from here. Later in survey a network of base-rich flush found to feed-in to this area from up slope (see Polygons H102, H103 and associated TNs)
TN15	265427	606979	Steep sides to burn channels U5a & H12 (mainly N/S banks respectively)
TN16	265432	606984	Between burn channels (TN16-17); M19 60: M15 20: U5 20
TN17	265476	606965	M6d ( <i>J.effusus</i> ) 85%: M6a 15%. This arm of burn supports more acidic habitats and is flanked by extensive sheets of <i>S.palustre &amp; S.fallax</i>
TN18 (H82)	265510	606834	M32. NS65510/ 06834; Third spring emerges here.

Target note	Easting	Northing	Description (See <b>Appendix 03</b> ) for full species names.	
number				
TN19	265233	606055	General observation: across hill slope (and elsewhere there are numerous runnels of damp ground dominated by <i>C.nigra</i> (no NVC). These are not soligenous flush features (no <i>Sphagnum</i> ) and are too numerous and/or small to map.	
			Location of borrow pit: same mosaic as described for polygon; fine-grain mosaic of M15d ( <i>T.cespitosum/Narthecium/E.angustifolium/J.squarrosus</i> ) in a grassy sward dominated by <i>Nardus</i> with <i>A.odoratum</i> abundant.	
			U5: mainly U5d with mixed grass sward, some rich in <i>C.panacea</i> (also U5c but lacking mesotrophic herbs).	
TN19	265225	605991	H18 - small patches <i>Vaccinium/Deschampsia</i> and <i>C.nigra</i> on damper areas throughout. Peat depth <0.5 m	
TN1A	265457	607752	M15a; C.panacea sub-community; indicates mild flushing NS65457/07752	
TN20	265399	606340	M32 Spring-head - emerges at NS 65399/06340. Quite extensive & speciesrich ( <i>S.stellata</i> very abundant, with much <i>C.oppositifolium</i> ). Feeds into small sedge rich mire ( <i>C.pingucula/C.panacea/C.echinata</i> ), then into the sedge variant of M23 (small sedge rich, with abundant <i>J.effusus/Cirsium palustre</i> ). <i>C.nigra</i> is abundant throughout flush. Although TN, mapped as a polygon.	
TN21	265264	606370	As described in H86; burn above M32 flush is completely dry; a clear indication of GW dependency at spring location	
TN22	265281	606991	M10: base- rich flush at head of watercourse. Too small to map.	
TN23	265281	607017	M10: 65281/07017	
TN24	265273	607047	Spring emerging NS65273/07047. <i>Polytrichum/S.denticulum</i> . No NVC established.	
TN25	265304	607105	M31 Spring emerging NS65304/07105 - see quadrat H7.	
TN26	265252	607111	H18 above NS 65252/07111: extensive on steep, rocky slop at altitude of 600-660 m. May represent the natural community here. Rhacometrium/Cladonia/B.spicant are abundant but no montane spp are present. This is a natural-looking Vaccinium heath on steep, east/north east slope this suggests that there is some snow accumulation here; which is also supported by the M31 spring below, a community normally found at high altitudes and sustained by meltwater from snow beds.	
TN27	265048	605659	M32 Spring NS65048/05659: Bryophytes relatively scarce; small quantity <i>P.fontana</i> & <i>W.exenullata</i> . <i>Montia fontana</i> dominant, with <i>C.oppositifolium</i> abundent. Flush below like neutral mire (M23) but lacking <i>Juncus</i> . <i>Galium palustre</i> , <i>C.pratensis</i> , <i>S.alsine</i> , <i>V.palustre</i> , <i>R.acris</i> & <i>R.flammula</i> , <i>R.acetosa</i> are all abundant.	

Target	Easting	Northing	Description (See <b>Appendix 03</b> ) for full species names.
note number			
TN28	265334	605073	NS65334/05073; heavily grazed heath reverted to U4e
TN29	265316	605064	NS65316/05064; spring-head; giving rise to neutral M23 community similar to TN27 (but lacking <i>C.oppositifolium/M.fontana</i> ). Juncus dominant though grazed - fairly typical M23 community. Bryophytes include <i>P.fontana &amp; C.cuspidata</i> . Flanked by U4e downslope.
TN29A	265238	605229	Dashed line shows approximate position of stock fence across Greenlorg Hill - transition from reasonably intact blanket mire to north and grazed out bog/heath to south (H18/U4e). The slopes to south have numerous springs and associated neutral flushes (see TNs)
TN30	265314	605051	NS65314/05051; spring head giving rise to M23
TN31	265395	604851	Flower-rich community on flush-line. Mossy saxifrage (Saxifraga hypnoides) is very abundant; associated with C.pratensis/Cirsium palustre/Galium palustre/C.panacea/Anenome nemorosa over carpet of H.splendens. Presently quite dry but presumed GW irrigation (see TN 32)
TN32	265403	604872	Walked-up to source of M32 spring at NS65403/04872. Again modified, presumably by grazing, bryophyte cover poor: <i>C.cuspidata</i> with <i>P.fontana</i> , <i>C.cuspidatum &amp; P.undulatum, C.oppositifolium/M.fontana, Saxifragia stellata</i> present. Quite grassy with <i>A.odoratum</i> & much <i>R.acetosa</i> .
TN33	265562	604878	NS 65562/04878: Broad area of M23 entering burn gully from SW
TN34	265849	604748	NS 65849/04748. Source of M32 spring giving rise to M23 flush. Modified, as described (beyond buffer). <i>Saxifraga hypnoides</i> abundant.
TN34	265815	604837	M32 spring emerging at NS65815/04837: feeds fairly extensive area of M23 below. Both <i>Saxifraga stellata</i> and <i>hypnoides</i> in flush, with <i>C.rostrata/Equisetum palustre</i> abundant. Grades to M6 at edges.
TN34	265550	604836	Small swathe of M23 entering river from W. NS65550/04836
TN35	265995	605057	M6a/M6c; burn/drainage channel with M6. Broadens at NS65995/05057.
TN35	265900	605100	M32 spring emerging at NS65900/51000; joins flush coming (acid flush: M6) from above and feeds fairly extensive area of M23 below. Saxifraga stellata present. In the vicinity of saxifrage a more calcareous community; C.hostiana & bryophytes Palustriella commutata/S.cossinii. Elsewhere bryophyte dominated by C.cuspidata with much D.palustre. Sphagnum squarrosum is present. Grades to fairly typical M23 but then quickly more acidic (M6). Clear GW input. Location of calcareous input: 65901/05102
TN35	265491	604849	Line of M23 at NS65491/04849- presume spring above
TN36	265422	604938	Flush line with abundant Saxifraga hypnoides NS65422/04938

Target note number	Easting	Northing	Description (See <b>Appendix 03</b> ) for full species names.
TN37	265434	605052	Flush line: M23 NS 65434/05052
TN39	0	0	M6 flush running north
TN40	265263	605341	M15a: flushed wet heath, <i>C.panacea</i> is abundant. Heath spot orchid is frequent. NS65263/05341
TN41	265211	605383	Large erosion gulley M20Sph. NS65211/05383
TN42	265414	607158	M15a
TN43	265390	607630	M15a
TN44	264998	609356	M15a: <i>C.panacea</i> abundant. Possibly GW coming through very thin peat at NS64998/09356. U5c is frequent where <i>Nardus</i> is dominant.
TN45	265056	609018	Groundwater spring (highly modified) sitting within what is a poor acid flush (M6-see TN46) with what appears to be GW issue at NS65056/09018. S.scorpioides/S.cossinii/B.pseudotriqetrum at point of issue; gives rise to a species-poor M10 small sedge community (grazed), species include: C.viridula/C.panacea/C.echinata, Triglochin palustris.
TN46	0	0	Species poor acid flush: <i>Juncus effusus</i> (M6c) or <i>Carex nigra</i> dominant ( <i>C.nigra</i> variant of M6b). <i>S.fallax</i> present but ground layer dry in places and dominated by <i>Polytrichum</i> . Signs of disturbance.
TN46	267674	610471	NS67674/10471: M23 (modified), running east from culvert/ track drainage. Diffuse as moves through brash/clearfell stumps. <i>J.effusus</i> dominant; associated bryophytes include <i>D.palustre/P.fontana</i> . Other associates include <i>R.acetosa/C.pratensis J.articulatus/C.flexuosa</i> .

# **APPENDIX 03**

# Plant Species List

Latin name	Common name
Agrostis canina	Velvet bent
Agrostis capillaris	Common bent
Agrostis spp	Bent grass
Agrostis stolonifera	Creeping bent
Agrostis tenuis	Browntop bent
Agrostis vinealis	Brown bent
Ajuga reptans	Bugle
Angelica sylvatica	Angelica
Anemone nemorosa	Wood anemone
Anthelia julacea	Alpine silverwort
Anthoxanthum odoratum	Sweet vernal grass
Arrhenatherum elatius	False oat grass
Aulacomnium palustre	Moss
Brachythecium rutabulum	Moss
Blechnum spicant	Hard fern
Bryum pseudotriquetrum	Marsh bryum
Calluna vulgaris	Heather
Cardamine pratensis	Cuckooflower
Carex binervis	Green-ribbed sedge
Carex curta	White sedge
Carex dioica	Dioecious sedge
Carex flacca	Blue sedge
Carex disticha	Brown sedge
Carex echinata	Star sedge
Carex hostiana	Tawny sedge
Carex nigra	Black sedge
Carex panicea	Carnation sedge

Latin name	Common name
Carex pulicaris	Flea sedge
Carex rostrata	Bottle sedge
Carex viridula subsp. oedocarpa	Little green sedge
Cerastium fontanum	Mouse-ear chickweed
Chamaenerion angustifolium	Rosebay willowherb
Chrysosplenium oppositifolium	Opposite leaved golden saxifrage
Cirsium arvense	Creeping thistle
Cirsium palustre	Marsh thistle
Cladonia portentosa	Lichen
Cladonia spp	Lichen
Cladonia uncialis	Lichen
Climacium dendroides	Tree climacium moss
Conopodium majus	Pignut
Crepis paludosa	Marsh hawk's beard
Cynosurus cristatus	Crested dog's-tail
Dactylorhiza maculata	Heath-spotted orchid
Deschampsia cespitosa	Tufted hair grass
Deschampsia flexuosa	Wavy hair grass
Dicranum scoropodium	Moss
Digitalis purpurea	Foxglove
Dryopteris filix-mas	Male fern
Dryopteris spp	Fern
Empetrum nigrum	Crowberry
Epilobium montanum	Broadleaved willowherb
Epilobium palustre	Marsh willowherb
Erica tetralix	Cross leaved heath
Eriophorum angustifolium	Common cotton grass
Eriophorum vaginatum	Hare's-tail cotton grass
Festuca ovina	Sheep's fescue
Festuca vivipara	Viviparous fescue

Latin name	Common name
Filipendula ulmaria	Meadowsweet
Fragaria vesca	Wild strawberry
Galium palustre	Marsh bedstraw
Galium saxatile	Heath bedstraw
Galium uliginosum	Fen bedstraw
Glyceria fluitans	Floating sweet grass
Gymnocolea inflata	Inflated notchwort
Hippuris vulgaris	Mare's tail
Holcus lanatus	Yorkshire fog
Holcus mollis	Creeping soft grass
Hylocomium palustre	Moss
Hylocomium splendens	Moss
Hypnum jutlandicum	Moss
Juncus acutiflorus	Sharp flowered rush
Juncus bulbosus	Bulbous rush
Juncus effusus	Soft rush
Juncus squarrosus	Heath rush
Kindberga praelonga	Feather moss
Lathyrus pratensis	Meadow vetchling
Lotus corniculatus	Birds-foot trefoil
Luzula campestris	Wood field rush
Luzula multiflora	Many-flowered or heath wood rush
Luzula sylvatica	Wood rush
Lysimachia nemorum	Yellow pimpernel
Marchantiophyta sp.	Liverwort
Marsupellia emarginata	Notched rustwort
Molinia caerulea	Purple moor grass
Montia fontana	Blinks
Myosotis secunda	Creeping forget-me-not
Nardus stricta	Mat grass

Latin name	Common name
Narthecium ossifragum	Bog asphodel
Oreopteris limbosperma	Lemon scented fern
Pseudoscleropodium purum	Moss
Philonotis fontana	Fountain Apple-moss
Picea sitchensis	Picea sitchensis
Pilosella officinarum	Mouse-ear hawkweed
Pinguicula vulgaris	Common butterwort
Plagiothecium undulatum	Moss
Plantago lanceolata	Ribwort plantain
Pleurozium schreberi	Moss
Poa trivialis	Rough meadow grass
Pohlia ludwigii	Thread moss
Polygala serpyllifolia	Heath milkwort
Polytrichum strictum	Bog haircap
Polytrichum formosum	Bank haircap
Polytrichum commune	Common haircap
Potentilla erecta	Tormentil
Potentilla reptans	Creeping cinquefoil
Potentilla sterilis	Barren strawberry
Pseudoscleropodium purum	Moss
Racomitrium lanuginosum	Moss
Ranunculus acris	Meadow buttercup
Ranunculus flammula	Lesser spearwort
Ranunculus repens	Creeping buttercup
Ranunculus omiophyllus	Round-leaved water crowfoot
Rhytidiadelphus loreus	Moss
Rhytidiadelphus squarrosus	Moss
Rubus chamaemorus	Cloudberry
Rubus idaeus	Raspberry
Rumex acetosa	Common sorrel

Latin name	Common name
Salix cinerea	Grey willow
Saxifraga stellaris	Starry saxifrage
Saxifraga hypnoides	Mossy saxifrage
Scorpidium cossini	Moss
Scorpioides scorpidium	Hooked Scorpion-moss
Selaginella selaginoides	Spike clubmoss
Sphagnum capillifolium	Bog moss
Sphagnum compactum	Bog moss
Sphagnum cuspidatum	Bog moss
Sphagnum denticulatum	Cow-horn bog moss
Sphagnum fallax	Bog moss
Sphagnum fimbriatum	Bog moss
Sphagnum magellanicum	Bog moss
Sphagnum papillosum	Bog moss
Sphagnum tenellum	Bog moss
Sphagnum palustre	Bog moss
Sphagnum subnitens	Bog moss
Sphagnum squarrosum	Spike bog moss
Stachys palustris	Marsh wound wort
Stellaria alsine	Bog stitchwort
Succisa pratensis	Devils bit scabious
Thuidium tamariscinum	Moss
Trichophorum cespitosum	Deer grass
Trichophorum germanicum	Deer grass
Trifolium repens	White clover
Triglochin palustre	Marsh arrow grass
Thymus polytrichus	Wild thyme
Vaccinium myrtillus	Bilberry
Vaccinium vitis-idaea	Cowberry
Valeriana officinalis	Valerian

Latin name	Common name
Viola palustris	Marsh violet
Viola Riviana	Common dog-violet
Warnstorfia exannulata	Ringless hook-moss

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