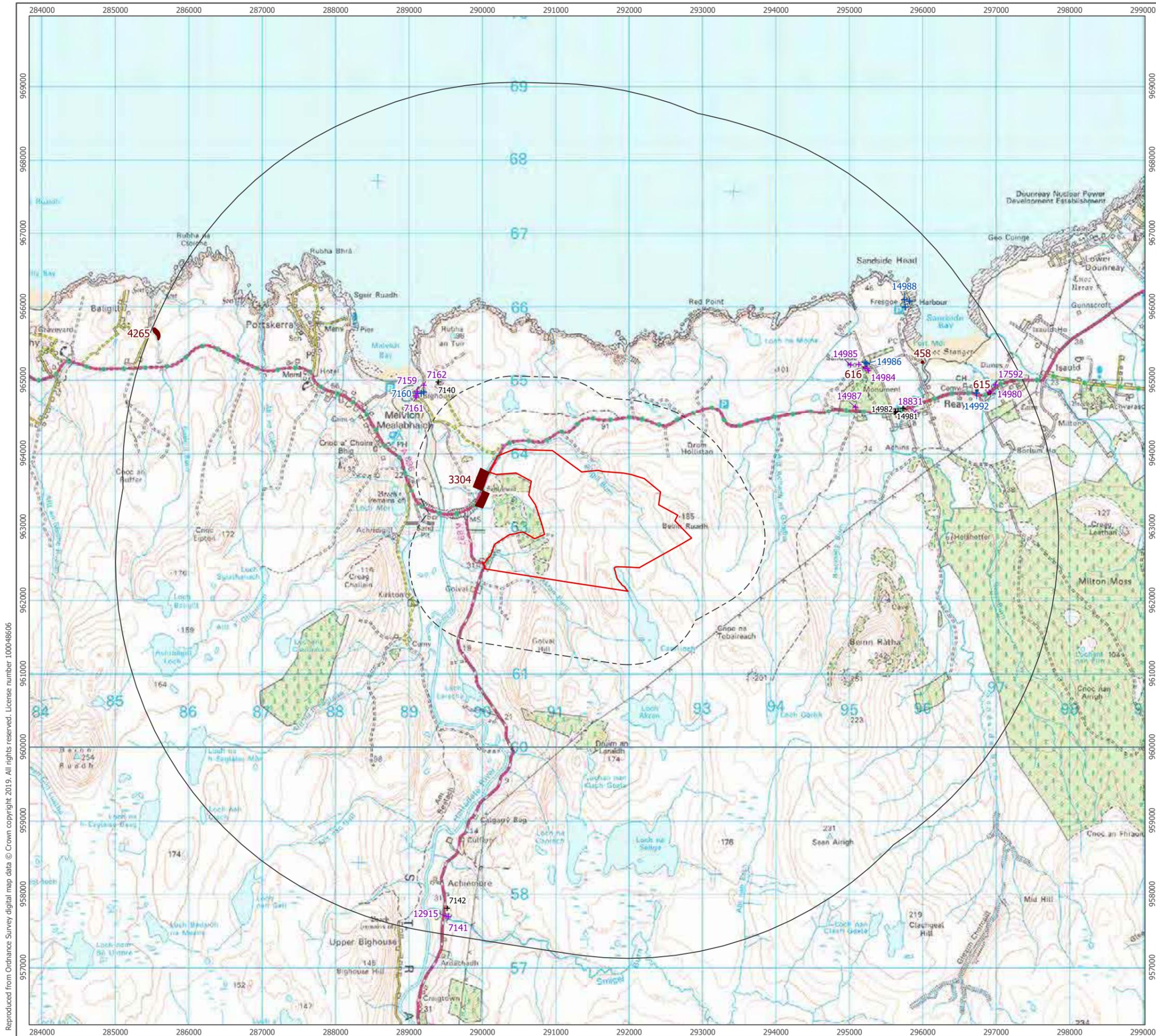


FIGURE 7.1: 2018 ORNITHOLOGY SURVEY AREAS
(INCLUDED IN CONFIDENTIAL APPENDIX D)



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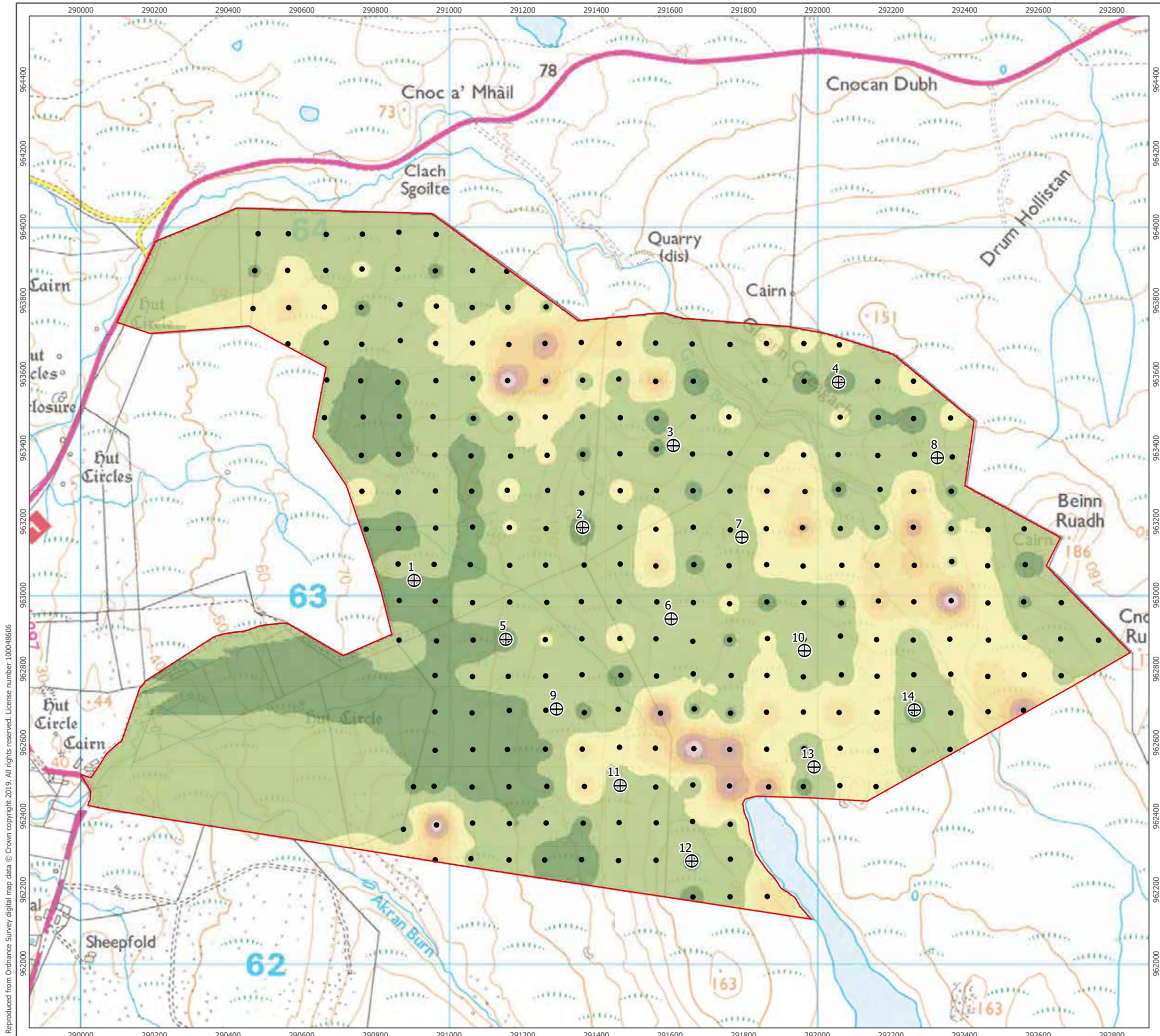
- Site Boundary
- 1 km Study Area
- 5 km Study Area
- + Category A Listed Building
- + Category B Listed Building
- + Category C Listed Building
- Scheduled Monument



Produced By: HW	Ref: 3138-REP-008
Checked By: HK	Date: 03/04/2019

Cultural Heritage Designations
Figure 8.1

Ackron Wind Farm
Scoping Report



- Site Boundary
 - Peat Probe Locations
 - ⊕ Proposed Turbine Location
- Interpolated Peat Depths (m)
- 0 - 0.50
 - 0.51 - 1.00
 - 1.01 - 1.50
 - 1.51 - 2.00
 - 2.01 - 2.50
 - 2.51 - 3.00
 - 3.01 - 3.50
 - 3.51 - 4.00
 - 4.01 - 4.50



Produced By: RL	Ref: 3138-REP-009
Checked By: SC	Date: 08/04/2019

Interpolated Peat Depths
Figure 12.1

Ackron Wind Farm
Scoping Report

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APPENDIX B: LIST OF SUGGESTED CONSULTEES AND CONSULTATION ADDRESS

The organisations shown below will be consulted with the relevant information as part of the Scoping process, although not all consultees will receive a copy of the Scoping Report.

Consultees to receive a copy of the Scoping Report

Statutory Consultees

- The Highland Council
- SEPA
- SNH
- Historic Environment Scotland
- Melvich Community Council
- Caithness West Community Council

Non-Statutory Consultees

- Atkins
- Civil Aviation Authority – Airspace
- Crown Estate Scotland
- BT
- Defence Infrastructure Organisations
- Fisheries Management Scotland
- Scottish Forestry
- Highlands and Islands Airports
- John Muir Trust
- Marine Scotland
- Mountaineering Scotland
- NATS Safeguarding
- Ofcom
- RSPB Scotland
- Scottish Rights of Way and Access Society
- Scottish Water
- Scottish Wild Land Group
- Scottish Wildlife Trust
- Transport Scotland
- Visit Scotland

Responses

All responses should be addressed to:

The Highland Council
Glenurghart Road
Inverness
IV3 5NX

Telephone: 01349 886608

Online responses can be submitted via Highland Council Planning Portal available at <https://wam.highland.gov.uk/wam/>

Responses should also be directed to the agent, on behalf of the Applicant, at:

Arcus Consultancy Services Ltd
7th Floor
144 West George Street
Glasgow
G2 2HG

Email: info@arcusconsulting.co.uk

Telephone: 0141 221 9997

If you would like any more information prior to responding to the Scoping Report, please contact Arcus at the address above.

APPENDIX C: PHASE 1 HABITATS AND NVC SURVEY 2018

Proposed Ackron Wind Farm
on behalf of Airvolution Clean Energy Ltd.
Habitats and Vegetation Survey Report 2018



Document Control				
Project Name:		Proposed Ackron Wind Farm		
Project Number:		Airvol-001-905		
Report Title:		Habitats and Vegetation Survey Report 2018		
Issue	Date	Notes	Prepared	Reviewed
v1	11/10/2018	1 st draft	N. Robinson <i>MSc BSc ACIEEM</i>	U. Maginn <i>MSc MCIEEM</i>

This report has been prepared in accordance with the terms and conditions of appointment for Habitats and Vegetation Surveys [on request]. Avian Ecology Ltd. (6839201) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

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FIGURE 1: STUDY AREA

FIGURE 2: PHASE 1 HABITAT PLAN

FIGURE 3: NVC PLAN

APPENDIX 1: PHOTOGRAPHIC PLATES

APPENDIX 2: TARGET NOTES (TNS)

APPENDIX 3: WOODLAND DESCRIPTIONS

APPENDIX 4: SPECIES LISTS AND DOMIN SCORES

1 INTRODUCTION

1.1.1 This report presents the results an Extended Phase 1 habitat and National Vegetation Classification (NVC) survey conducted in August 2018, in relation to the proposed Ackron wind farm, located on land to the south east of Melvich, Sutherland, Scotland.

1.1.2 The objectives of the surveys were to:

- Establish the spatial distribution of habitats and vegetation communities which may be impacted by the proposed Ackron wind farm development; and
- Identify the presence of Groundwater Dependent Terrestrial Ecosystems (GWDTEs).

1.1.3 Survey and analysis were undertaken by Mr C. Davies MSc MCIEEM, a highly competent botanist with extensive experience in the undertaking of botanical surveys in the Scottish uplands and across the UK.

2 STUDY AREA OVERVIEW

2.1.1 The study area for survey has comprised the land option as shown on **Figure 1**, extended to include lands out to 250m to ensure compliance with Scottish Environment Protection Agency (SEPA) guidance (2017¹) with respect to the subsequent identification of ground water dependent terrestrial ecosystems (GWDTE) for the purposes of impact assessment.

2.1.2 Areas to the west of the A897 and to the north of the A836 were excluded, as shown on **Figure 1**, due to the severance of connectivity to the land option by roadways.

3 METHODOLOGY

3.1.1 Survey methodologies and subsequent interpretation of results have made reference to the following key pieces of guidance;

- Averis, A., Averis, B., Birks, J., Horsfield, D., Thompson, D., Yeo, M. (2004) *An Illustrated Guide to British Upland Vegetation*. JNCC, Peterborough.
- JNCC (2010) Handbook for Phase 1 Habitat Survey - a technique for environmental audit. Revised Reprint 2010. JNCC, Peterborough.
- JNCC (2011) Spreadsheet of "Conservation Designations for UK Taxa" from <http://www.jncc.gov.uk/default.aspx?page=3409>. Accessed 18th August 2018.
- Rodwell, J. S. (2006) National Vegetation Community Users' Handbook. JNCC, Peterborough.
- Rodwell, J. S. (ed.) (1993) British Plant Communities. Volume 2. Mires and Heaths. Cambridge University Press, Cambridge.
- Rodwell, J. S. (ed.) (1992) British Plant Communities. Volume 3. Grasslands and montane communities. Cambridge University Press, Cambridge.

¹ SEPA (2017) SEPA Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems. Version 3.

- Scotland and Northern Ireland Forum for Environmental Research (SNIFFER, 2009) WFD95: *A Functional Wetland Typology for Scotland – Field Survey Manual*. Version 1.

Extended Phase 1 Habitat Survey

- 3.1.2 An Extended Phase 1 habitat survey was undertaken on the 6th of August 2018. The survey was undertaken in accordance with the UK industry standard Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Methodology (JNCC, 2010), extended to include the additional recording of specific features indicating the presence, or likely presence, of protected or notable fauna species.
- 3.1.3 During survey all habitats within the study area were mapped according to industry standards and described using a series of ‘target notes’ (TNs).
- 3.1.4 The survey was undertaken in fine weather conditions conducive to survey and no limitations to the survey were experienced, being undertaken at an appropriate time of year for botanical surveys and with no access restrictions.

NVC Survey

- 3.1.5 An NVC survey was undertaken between the 7th and 10th of August 2018 following the guiding principles detailed within the ‘National Vegetation Classification: User’s Handbook’ (Rodwell, 2006). Within the study area, areas were selected for NVC survey based on the presence of homogenous stands of vegetation and focusing on habitats of potential nature conservation value, as identified during the initial Phase 1 Habitat Survey.
- 3.1.6 During survey, square quadrats of size 2m² were distributed throughout homogenous stands identified in order to provide a representative sample of the vegetation community present.
- 3.1.7 In each quadrat sample area, data was collected on the presence and abundance of vascular plant species using the DOMIN scale. This data were then analysed and classified to an NVC vegetation community, where possible, using the keys in Rodwell (various) British Plant Communities Volumes 1 to 5.
- 3.1.8 Rudimentary peat depths were also taken across the study area at quadrat locations.

4 RESULTS

- 4.1.1 This section should be read with reference to the following:
- **Figure 2:** Phase 1 habitat plan;
 - **Figure 3:** NVC plan;
 - **Figure 4:** Quadrat locations;
 - **Appendix 1:** Photographic plates;
 - **Appendix 2:** Target Notes (TNs);
 - **Appendix 3:** Woodland descriptions; and,
 - **Appendix 4:** Species lists and DOMIN Scores.
- 4.1.2 Approximate peat depths (<0.5m or >0.5m) taken at quadrat locations during NVC survey are also presented in **Appendix 4**. Such depths should not be taken as accurate, but merely as a guide to assist in habitat and NVC community classification. Quadrat locations are shown in **Figure 4**.

4.2 Overview

4.2.1 The following Phase 1 habitat types were recorded within the study area:

- Broad-leaved semi-natural woodland (A1.1.1);
- Coniferous woodland plantation (A1.2.2);
- Mixed woodland plantation (A1.3.2);
- Dense scrub (A2.1);
- Semi-improved acid grassland (B1.2);
- Continuous bracken (C1.1);
- Scattered bracken (C1.2);
- Wet dwarf shrub heath (D2);
- Blanket bog (E1.6.1);
- Wet modified bog (E1.7);
- Acid/neutral flush (E2.1);
- Quarry (I2.1);
- Buildings, Domestic (J3.6);
- Standing water (G1);
- Running water (G2);
- Fence (J2.4); and,
- Wall (J2.5).

4.2.2 The land option and wider study area is dominated by blanket mire and wet heath, with large areas of coniferous plantation woodland. The dominant species across both the blanket mire and wet heath comprise deer grass *Trichophorum cespitosum*, ling *Calluna vulgaris* and hare's-tail cottongrass *Eriophorum vaginatum*. The two habitats are very similar in many respects and they are largely distinguished by peat depth and incline, with blanket mire occurring on mainly level ground at peat depths > 50cm whereas the areas of wet heath tend to be on shallower peat and greater inclines, though there is overlap.

4.2.3 To the north of the land option, blanket mire habitats are evidently degraded, with low species diversity overly dominated by deer grass with patches of bare ground. Most of the ling in this area is dead, though the degraded nature of the mire does encourage other species such as bearberry *Arctosaphylos uva-ursi* which was not found elsewhere within the study area.

4.2.4 The areas of woodland habitat are all located within the west of the land option and study area and are established on former areas of blanket mire. Woodlands consist entirely of Sitka spruce *Picea sitchensis* or Scots pine *Pinus sylvestris*, with one small area of rowan *Sorbus aucuparia* woodland which may be semi-natural.

- 4.2.5 Boundaries within the study area are almost exclusively wire fencing of varying heights. There is a large amount of deer fencing around and across the study area.
- 4.2.6 Two main burns run through the land option. The main burn is Giligill burn with its source located within the centre of the blanket mire within the land option. This burn runs mainly through the east and north of the land option.
- 4.2.7 In the south of the land option is Ackran burn, which is substantially wider and faster flowing but only just passes through the extreme south west of the study area.
- 4.2.8 The west part of the land option and study area around the plantation woodlands and farm buildings is a mosaic of degraded blanket mire, semi-improved grasslands, scrub and two areas of quarry and cleared ground.
- 4.2.9 No signs of protected species were found, though the watercourses and Caol Loch have potential for otter *Lutra lutra* and possibly water vole *Arvicola amphibius*.
- 4.2.10 No bat roost potential was found, though the farm buildings in the south west of the land option may provide some opportunities.
- 4.2.11 A single common lizard was recorded over the course of surveys (see **Appendix 2**).

4.3 NVC Communities

4.3.1 The following NVC communities were recorded within the study area:

- M15b *Trichophorum cespitosum-Erica tetralix* wet heath, Typical sub-community;
- M17b *Trichophorum cespitosum-Eriophorum vaginatum* blanket mire, *Cladonia* species sub-community; and,
- M25b *Molinia caerulea-Potentilla erecta* mire, *Anthoxanthum odoratum* sub-community.

Wet Heath

Photographic Plates: **A & B**

- 4.3.2 The best community match for wet heath within the study area is M15 *Trichophorum cespitosum-Erica tetralix* wet heath. This is a ubiquitous community over much of the north and west of Scotland. The community is dominated by *Calluna vulgaris*, *Erica tetralix*, *Trichophorum cespitosum* and *Molinia caerulea* and has much *Narthecium ossifragum* and *Eriophorum angustifolium*. The sub-community present on study area is M15b typical sub-community.
- 4.3.3 Due to this community's very similar species composition to M17 *Trichophorum cespitosum-Eriophorum vaginatum* blanket mire, one of the best ways to distinguish wet heath is from the associated peat depth and incline. All of the areas of wet heath within the study area were on peat with a depth of <50cm and usually on relatively steep inclines.
- 4.3.4 Wet heath is a common and widespread habitat throughout Scotland but is rare globally. Very little of this type of wet heath is thought to be natural and exists due to woodland clearance and grazing. Grazing by deer is thought to be essential in maintaining the structural and floristic diversity of the community (Averis *et. al.*, 2004).

Blanket Bog

Photographic Plates: **C & D**

- 4.3.5 The best community match for blanket bog within the study area is M17 *Trichophorum cespitosum-Eriophorum vaginatum* blanket mire. This community is typically dominated by *Trichophorum cespitosum*, *Eriophorum vaginatum* and *Eriophorum angustifolium* with *Calluna vulgaris* and *Erica tetralix*. *Sphagnum papillosum* and *S. capillifolium* are the commonest sphagnums whilst *Narthecium ossifragum* and the *Drosera* species are also present in good numbers. All of the areas of blanket mire were on relatively flat ground or shallow incline, with a peat depth of >50cm.
- 4.3.6 Caution was exercised when considering the sub-community present during survey since 2018 has been an exceptionally dry year, with patches of sphagnum within the study area dry and unidentifiable. However, the composition of the vegetation and the dry nature of the peat did identify the overwhelming majority of blanket bog within the study area as being M17b, the *Cladonia* sub-community, though nowhere was *Cladonia* so dominant as to form the snow like patches which can be a feature of this sub-community elsewhere in the highlands.
- 4.3.7 In amongst some patches of dry sphagnum were *Drosera rotundifolium* and *D. anglica* as well as the liverwort *Pleurozia purpurea*, which are a feature of the sub-community M17a *Drosera rotundifolium*-sphagnum species. However these patches were a very small percentage of the overall landscape, and as such it is reasonable to consider all of the blanket bog within the study area to be of the M17b *Cladonia* sub-community.
- 4.3.8 Taking into account the dry summer, the blanket bog within the study area was generally considered to be in good health, based on the species composition and diversity. However there are areas of bog present which are very degraded, particularly within the west of the study area, between the plantation woodland and the A897 road and to the north of the land option. Typically these degraded areas have a high composition of *Trichophorum cespitosum* and mostly dead *Calluna vulgaris*, as well as a local abundance of ephemeral species such as *Arctostaphylos uva-ursi*. Degradation in the north is likely to be mainly as a result of over grazing by deer, whilst in the west due to a combination of farm activities, cattle grazing and the presence of large areas of plantation woodland.
- 4.3.9 Though common in the north and west of Scotland, M17 *Trichophorum cespitosum-Eriophorum vaginatum* blanket mire is rare globally (Averis *et.al.*, 2004).

Mire

Photographic Plates: **E & F**

- 4.3.10 There is a small area of M25 *Molinea caerulea-Potentilla erecta* mire present to the north of the land option, adjacent to the A836 and following the course of the Giligill burn. Typically the community type is almost totally dominated by *Molinea caerulea* but also has *Potentilla erecta*, *Viola palustris*, *Carex echinata*, *Sphagnum fallax*, *Blechnum spicant*, *Erica tetralix* and *Juncus conglomerates*.

4.4 Protected and Notable Plant Species.

- 4.4.1 No specially protected plants listed on Schedule 8 of The Wildlife and Countryside Act 1981 or Red Data listed plant species (Dines *et al.*, 2005) were recorded within the study area.

5 SUMMARY

- 5.1.1 **Table 5.1** below presents a summary description of NVC community types recorded within the study area, together with corresponding Habitats Directive (97/62/EC) Annex 1 habitat types, Scottish Biodiversity List priority habitat types, Sutherland and Caithness Local Biodiversity Action Plan (LBAP) priority habitats types and their potential as a Groundwater Dependent Terrestrial Ecosystems (GWDTEs), in accordance with SNIFFER guidance (2009).

Table 5.1: NVC community summary.

NVC Community	Annex I Habitat Type(s)	Scottish Biodiversity List	Sutherland LBAP	Caithness LBAP	Ground Water Dependency?
M15 <i>Trichophorum cespitosum</i> - <i>Erica tetralix</i> wet heath	Northern Atlantic wet heaths with <i>Erica tetralix</i>	Upland heathland	Upland heathland	Upland heathland	Moderately
M17 <i>Trichophorum cespitosum</i> - <i>Eriophorum vaginatum</i> blanket mire	Blanket bog	Blanket bog	Blanket bog	Blanket bog	No
M25 <i>Molinia caerulea</i> - <i>Potentilla erecta</i> mire	Blanket bog	Blanket bog	Blanket bog	Blanket bog	Moderately ²

² Depending upon setting.

APPENDIX 1 – PHOTOGRAPHIC PLATES



Plates A & B: TN9 and characteristic composition of the M15b *Trichophorum cespitosum*-*Erica tetralix* wet heath typical sub-community type coverage through the centre of the study area.



Plates C & D: Characteristic composition of the M17b *Trichophorum cespitosum*-*Eriophorum vaginatum* blanket mire *Cladonia* sub-community present within the western extent of the study area.



Plates E & F: TN1 and characteristic composition of the M25b *Molinia caerulea*-*Potentilla erecta* mire, *Anthoxanthum odoratum* sub-community type coverage within the north west of the study area, adjacent to the A836.



Plate G: TN2, typical wet modified bog composition within the study area.



Plate H: TN3, typical blanket mire composition within the study area.



Plate I: TN4, enclosure of young trees establishing atop wet dwarf shrub heath.



Plate J: TN5, Akran Burn.



Plate K & L: TN6, head of Giligill Burn.





Plate M: TN7, Giligill Burn section, adjacent to the A836.



Plate N: W1, typical canopy composition.



Plate O: W2, typical canopy composition.



Plate P: W3, typical canopy composition.



Plate Q: W4, typical canopy composition.



Plate R: W5, typical canopy composition. Taking from the east, looking west over the study area towards the A897.



Plate S: W7, typical canopy composition.

APPENDIX 2 - TARGET NOTES (TNS)

Table A2.1 below presents Target Notes (TNS) and should be read with reference to Figure 2 and photographic plates presented in Appendix 1.

Table A2.1: Target notes.

Target Note	Description	Photographic Plate(s)
TN1	Molinea dominated mire – 99% purple moor grass <i>Molinia caerulea</i> , also bog myrtle <i>Myrica gale</i> , <i>Sphagnum fallax</i> , star sedge <i>Carex echinata</i> and tormentil <i>Potentilla erecta</i> .	E & F
TN2	Wet modified bog – 60% deer grass <i>Trichophorum cespitosum</i> , most ling <i>Calluna vulgaris</i> dead, bearberry <i>Arctostaphylos uva-ursi</i> , carnation sedge <i>Carex panicea</i> , heath rush <i>Juncus squarrosus</i> , tormentil, <i>Hypnum jutlandicum</i> , purple moor grass, <i>Sphagnum capillifolium</i> and wavy hair-grass <i>Deschampsia flexuosa</i> . Peat depth >50cm.	G
TN3	Blanket mire – deer grass, ling, bog myrtle, <i>Sphagnum capillifolium</i> , <i>Sphagnum papillosum</i> , hare's-tail cottongrass <i>Eriophorum vaginatum</i> , common cottongrass <i>Eriophorum angustifolium</i> , cross-leaved heath <i>Erica tetralix</i> , bog asphodel <i>Narthecium ossifragum</i> and <i>Cladonia</i> lichens.	H
TN4	Area of very young trees (<0.5m) atop wet dwarf shrub heath, surrounded by deer fence, probably planted but may have self-seeded due to browsing protection from the deer fenced. Mapped as Mixed plantation woodland (A1.3.2).	I
TN5	Akran burn 2m wide, fast flowing, stoney, steep sides through peat. Water vole <i>Arvicola amphibious</i> potential but no evidence found.	J
TN6	Head of Giligill burn – mainly dry but some standing water in places.	K & L
TN7	Giligill burn near the road – 0.75m wide, 0.3m deep, still, steep banks.	M
TN8	Common lizard <i>Zootoca vivipara</i> sighting NC 92603 62677.	-
TN9	Wet heath – deer grass, ling, cross-leaved heath, heath rush, tormentil, <i>Hypnum jutlandicum</i> , purple moorgrass and <i>Sphagnum capillifolium</i> . Peat depth <50cm.	A

APPENDIX 3 – WOODLAND DESCRIPTIONS

Table A3.1 below provides a summary of woodland habitats within the study area and should be read with reference to Figure 2 and photographic plates presented in Appendix 1.

Table A3.1: Woodland descriptions.

Woodland	Semi-natural (S/N) or Plantation (P)	Tree species	Dominant Tree Height (m)	Other notes	Photographic Plate(s)
W1	P	Scots pine	8	Very dense	N
W2	P	Scots pine	8	Very dense	O
W3	P	Sitka spruce	20	Very dense	P
W4	P	Sitka spruce	25	Very dense	Q
W5	P	Scots pine	8	Very dense	R
W6	P	Scots pine	8	Very dense	-
W7	S/N	Rowan	4	Very dense	S

APPENDIX 4 – NVC COMMUNITY SPECIES LISTS AND DOMIN SCORES

Table A4.2 to A4.8 present NVC survey quadrat data including species lists, DOMIN scores (based on Table A4.1) and approximate peat depths. Quadrat locations are shown on Figure 3.

Table A4.1: Dominance (DOMIN) scale.

Code	Approximate percentage cover in quadrat
10	>90%
9	75 – 90%
8	51 – 75%
7	34 – 50%
6	26 – 33%
5	11 – 25%
4	5 – 10%
3	<5%, many individuals
2	<5%, a few individuals
1	<5%, one or two individuals

Table A4.2: NVC survey quadrat data (Q1-12).

Quadrat	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Approximate Peat Depth	>50	>50	>50	>50	>50	>50	>50	>50	20	>50	>50	>50
Species	DOMIN Scores											
<i>Trichophorum cespitosum</i>	0	5	9	0	8	8	9	5	4	9	5	0
<i>Calluna vulgaris</i>	9	9	4	7	6	5	6	9	9	5	4	7
<i>Sphagnum capillifolium</i>	0	0	4	4	0	8	7	0	0	4	6	6
<i>Cladonia sp.</i>	0	7	8	4	8	0	9	0	0	7	0	0
<i>Molinia caerulea</i>	4	0	0	4	5	0	0	4	0	0	5	4
<i>Hypnum jutlandicum</i>	7	7	7	0	0	0	7	4	8	7	5	6
<i>Erica tetralix</i>	0	0	7	5	6	5	5	0	4	4	4	4
<i>Eriophorum angustifolium</i>	0	0	0	5	6	0	0	4	0	0	7	0
<i>Myrica gale</i>	4	0	0	0	0	0	0	0	0	0	0	6
<i>Eriophorum vaginatum</i>	0	0	0	4	0	4	0	0	0	4	0	6
<i>Sphagnum papillosum</i>	0	0	0	5	0	0	0	0	0	0	5	0
<i>Potentilla erecta</i>	4	0	0	4	0	4	0	4	4	4	4	4
<i>Narthecium ossifragum</i>	0	0	0	5	0	4	4	0	0	0	5	0
<i>Juncus squarrosus</i>	0	0	0	0	0	0	0	4	0	6	0	0
<i>Carex echinata</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum fallax</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Racomitrium lanuginosum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Melampyrum pratense</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rhytiadelphus loreus</i>	0	0	4	0	0	0	0	0	0	0	0	4
<i>Arctostaphylos uva-ursi</i>	0	0	0	0	0	0	0	4	8	0	0	0
<i>Dosera anglica</i>	0	0	0	4	0	0	0	0	0	0	0	0
<i>Succisa pratensis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Drosera rotundifolia</i>	0	0	0	0	0	0	0	0	0	0	4	0
<i>Pleurozia purpurea</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pleurozium schreberi</i>	0	0	0	4	0	0	0	0	0	0	0	0
<i>Deschampsia flexuosa</i>	0	0	0	0	0	0	0	0	4	0	0	4
<i>Dicranum scoparium</i>	0	0	0	0	0	0	0	0	0	0	4	0
<i>Sphagnum denticulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pilulifera</i>	4	0	0	0	0	0	0	4	5	0	4	0
<i>Empetrum nigrum</i>	0	0	0	0	0	4	0	0	0	0	0	4
<i>Pinguicula vulgaris</i> (butterwort)	0	0	0	0	0	0	0	0	0	0	0	4
<i>Betula nana</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex nigra</i>	6	0	0	0	0	0	0	0	0	0	0	0
<i>Rubus chamaemorus</i> (cloudberry)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lophocolea bidentata</i>	0	4	0	0	4	0	0	0	0	0	4	0
<i>Cladonia uncialis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex binervis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dactylorhiza maculata</i> (heath)	0	2	0	1	0	0	0	2	0	2	0	2
<i>Holcus lanatus</i>	1	0	0	0	0	0	0	0	0	0	0	0
<i>Plagiothecium undulatum</i>	0	0	0	4	0	0	0	0	0	4	0	4
<i>Luzula sylvatica</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hylocomium splendens</i>	0	0	0	0	0	0	0	0	0	4	0	0
<i>Sphagnum subnitens</i>	0	0	0	4	0	0	0	0	0	0	0	0
<i>Galium palustre</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Polytrichum juniperinum</i>	0	0	0	0	0	0	4	0	0	4	0	0
<i>Viola palustris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pulicaris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ranunculus repens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Juncus conglomeratus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Euphrasia sp.</i> (eyebright)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum tenellum</i>	0	0	0	4	0	0	0	0	0	0	0	0
<i>Luzula multiflora</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Achillea millefolium</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Danthonia decumbens</i>	0	0	0	0	0	0	0	0	0	0	0	0

Table A4.3: NVC survey quadrat data (Q13-24).

Quadrat	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
Approximate Peat Depth (cm)	>50	30	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50
Species	DOMIN Scores											
<i>Trichophorum cespitosum</i>	7	4	4	4	4	7	7	4	8	7	4	7
<i>Calluna vulgaris</i>	4	10	8	8	7	6	5	5	5	7	7	7
<i>Sphagnum capillifolium</i>	5	0	0	0	0	5	5	5	7	7	5	5
<i>Cladonia sp.</i>	0	0	6	0	5	0	0	6	6	7	0	0
<i>Molinia caerulea</i>	5	0	0	0	0	0	4	8	5	0	4	4
<i>Hypnum jutlandicum</i>	4	8	7	6	6	8	8	0	4	4	0	0
<i>Erica tetralix</i>	6	0	0	0	0	5	5	7	6	4	5	5
<i>Eriophorum angustifolium</i>	0	0	0	0	0	4	0	0	4	4	7	5
<i>Myrica gale</i>	5	0	0	0	0	5	0	6	6	5	6	6
<i>Eriophorum vaginatum</i>	7	0	0	0	0	4	4	4	4	5	0	4
<i>Sphagnum papillosum</i>	0	0	0	0	0	0	0	0	5	4	5	4
<i>Potentilla erecta</i>	4	0	0	0	0	4	5	4	4	4	4	4
<i>Narthecium ossifragum</i>	5	0	0	0	0	0	0	0	0	0	0	4
<i>Juncus squarrosus</i>	0	4	0	4	4	0	0	0	0	0	0	0
<i>Carex echinata</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum fallax</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Racomitrium lanuginosum</i>	5	0	0	0	0	0	0	0	4	5	4	0
<i>Melampyrum pratense</i>	5	0	0	0	0	0	0	0	4	4	4	1
<i>Rhytidadelphus loreus</i>	4	0	0	0	0	0	0	0	0	0	0	0
<i>Arctostaphylos uva-ursi</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dosera anglica</i>	0	0	0	0	0	0	0	0	0	0	4	4
<i>Succisa pratensis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Drosera rotundifolia</i>	0	0	0	0	0	0	0	0	0	0	4	0
<i>Pleurozia purpurea</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pleurozium schreberi</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Deschampsia flexuosa</i>	0	0	0	4	0	0	0	0	0	0	0	0
<i>Dicranum scoparium</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum denticulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pilulifera</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Empetrum nigrum</i>	0	0	0	0	0	5	0	0	0	0	0	0
<i>Pinguicula vulgaris</i> (butterwort)	4	0	0	0	0	0	0	0	4	0	0	0
<i>Betula nana</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex nigra</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rubus chamaemorus</i> (cloudberry)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lophocolea bidentata</i>	0	4	0	0	4	0	0	0	0	0	0	0
<i>Cladonia uncialis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex binervis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dactylorhiza maculata</i> (heath)	0	0	0	0	0	0	1	0	1	0	0	0
<i>Holcus lanatus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Plagiothecium undulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula sylvatica</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hylocomium splendens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum subnitens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Galium palustre</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Polytrichum juniperinum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Viola palustris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pulicaris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ranunculus repens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Juncus conglomeratus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Euphrasia sp.</i> (eyebright)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum tenellum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula multiflora</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Achillea millefolium</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Danthonia decumbens</i>	0	0	0	0	0	0	0	0	0	0	0	0

Table A4.4: NVC survey quadrat data (Q25-36).

Quadrat	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36
Approximate Peat Depth (cm)	>50	>50	>50	>50	30	>50	>50	>50	>50	>50	50	>50
Species	DOMIN Scores											
<i>Trichophorum cespitosum</i>	7	5	5	7	8	9	8	8	8	7	8	8
<i>Calluna vulgaris</i>	6	7	7	7	5	5	5	4	5	4	7	7
<i>Sphagnum capillifolium</i>	6	6	6	7	5	6	6	5	6	6	0	5
<i>Cladonia sp.</i>	6	5	0	5	0	0	8	8	8	8	5	5
<i>Molinia caerulea</i>	5	4	4	4	4	5	0	4	0	0	4	4
<i>Hypnum jutlandicum</i>	4	0	0	0	7	0	4	4	0	0	5	0
<i>Erica tetralix</i>	5	5	4	5	4	4	4	4	4	6	4	5
<i>Eriophorum angustifolium</i>	5	4	6	5	0	5	4	4	4	0	0	4
<i>Myrica gale</i>	6	5	6	6	6	0	0	0	5	0	0	0
<i>Eriophorum vaginatum</i>	5	4	5	4	0	4	4	0	4	0	0	5
<i>Sphagnum papillosum</i>	4	5	6	4	0	0	0	0	6	7	0	4
<i>Potentilla erecta</i>	4	4	4	4	4	4	4	4	4	4	4	4
<i>Narthecium ossifragum</i>	0	0	4	0	0	0	0	0	4	0	6	4
<i>Juncus squarrosus</i>	0	0	0	0	4	0	0	4	0	0	4	0
<i>Carex echinata</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum fallax</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Racomitrium lanuginosum</i>	4	0	4	0	0	0	0	0	0	0	0	0
<i>Melampyrum pratense</i>	4	4	0	4	0	0	0	4	0	0	0	4
<i>Rhytiadelphus loreus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctostaphylos uva-ursi</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dosera anglica</i>	4	0	4	4	0	0	0	0	0	4	0	0
<i>Succisa pratensis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Drosera rotundifolia</i>	0	0	0	4	0	0	0	0	4	4	0	0
<i>Pleurozia purpurea</i>	4	4	0	4	0	0	0	0	0	4	0	4
<i>Pleurozium schreberi</i>	0	0	0	4	0	0	0	0	0	0	0	0
<i>Deschampsia flexuosa</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranum scoparium</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum denticulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pilulifera</i>	0	0	0	0	0	0	0	0	0	4	0	0
<i>Empetrum nigrum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pinguicula vulgaris</i> (butterwort)	4	0	4	0	0	0	0	0	0	0	0	0
<i>Betula nana</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex nigra</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rubus chamaemorus</i> (cloudberry)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lophocolea bidentata</i>	0	0	0	0	0	0	0	0	4	0	0	0
<i>Cladonia uncialis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex binervis</i>	0	0	0	0	0	0	0	4	0	0	0	0
<i>Dactylorhiza maculata</i> (heath)	1	0	1	0	0	1	0	1	0	0	0	0
<i>Holcus lanatus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Plagiothecium undulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula sylvatica</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hylocomium splendens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum subnitens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Galium palustre</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Polytrichum juniperinum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Viola palustris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pulicaris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ranunculus repens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Juncus conglomeratus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Euphrasia sp.</i> (eyebright)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum tenellum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula multiflora</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Achillea millefolium</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Danthonia decumbens</i>	0	0	0	0	0	0	0	0	0	0	0	0

Table A4.5: NVC survey quadrat data (Q37-48).

Quadrat	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48
Approximate Peat Depth (cm)	>50	>50	>50	>50	>50	>50	40	40	40	30	40	>50
Species	DOMIN Scores											
<i>Trichophorum cespitosum</i>	7	7	7	7	6	7	8	8	8	6	7	7
<i>Calluna vulgaris</i>	6	7	7	7	8	7	8	6	7	7	7	8
<i>Sphagnum capillifolium</i>	0	4	5	6	9	8	6	7	7	5	6	4
<i>Cladonia sp.</i>	5	6	5	4	4	8	8	8	8	7	5	7
<i>Molinia caerulea</i>	4	5	4	4	5	6	6	7	5	4	5	6
<i>Hypnum jutlandicum</i>	5	0	4	4	0	0	5	4	0	5	5	5
<i>Erica tetralix</i>	5	4	5	4	5	5	4	5	5	4	4	4
<i>Eriophorum angustifolium</i>	4	4	4	4	6	7	5	5	6	5	4	4
<i>Myrica gale</i>	4	0	4	0	0	0	0	0	4	0	0	0
<i>Eriophorum vaginatum</i>	4	4	4	5	4	0	0	4	0	5	4	5
<i>Sphagnum papillosum</i>	0	0	0	4	4	0	0	0	0	4	0	0
<i>Potentilla erecta</i>	4	4	4	4	4	0	4	4	0	4	4	4
<i>Narthecium ossifragum</i>	0	4	4	5	4	0	0	0	0	4	0	0
<i>Juncus squarrosus</i>	0	4	4	4	0	4	0	0	0	4	0	4
<i>Carex echinata</i>	0	0	0	0	0	0	0	0	4	0	0	0
<i>Sphagnum fallax</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Racomitrium lanuginosum</i>	4	0	4	0	0	0	0	0	0	0	0	0
<i>Melampyrum pratense</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Rhytiadelphus loreus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctostaphylos uva-ursi</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dosera anglica</i>	4	0	4	4	0	0	0	0	0	0	0	0
<i>Succisa pratensis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Drosera rotundifolia</i>	4	0	4	0	0	1	0	0	4	0	0	0
<i>Pleurozia purpurea</i>	0	4	4	0	0	0	0	0	0	0	0	0
<i>Pleurozium schreberi</i>	4	0	0	0	0	0	0	0	0	0	0	0
<i>Deschampsia flexuosa</i>	0	0	0	0	0	0	0	0	0	4	0	0
<i>Dicranum scoparium</i>	4	0	0	0	0	0	0	4	0	0	0	0
<i>Sphagnum denticulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pilulifera</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Empetrum nigrum</i>	0	0	0	0	0	0	0	4	0	0	0	0
<i>Pinguicula vulgaris</i> (butterwort)	4	0	4	0	0	0	0	0	0	0	0	0
<i>Betula nana</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex nigra</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rubus chamaemorus</i> (cloudberry)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lophocolea bidentata</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cladonia uncialis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex binervis</i>	0	0	0	0	0	0	4	0	4	0	4	0
<i>Dactylorhiza maculata</i> (heath)	0	1	0	0	0	1	0	0	0	0	1	0
<i>Holcus lanatus</i>	0	0	0	0	0	0	0	0	0	0	4	0
<i>Plagiothecium undulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula sylvatica</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hylocomium splendens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum subnitens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Galium palustre</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Polytrichum juniperinum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Viola palustris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pulicaris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ranunculus repens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Juncus conglomeratus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Euphrasia sp.</i> (eyebright)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum tenellum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula multiflora</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Achillea millefolium</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Danthonia decumbens</i>	0	0	0	0	0	0	0	0	0	0	0	0

Table A4.6: NVC survey quadrat data (Q49-60).

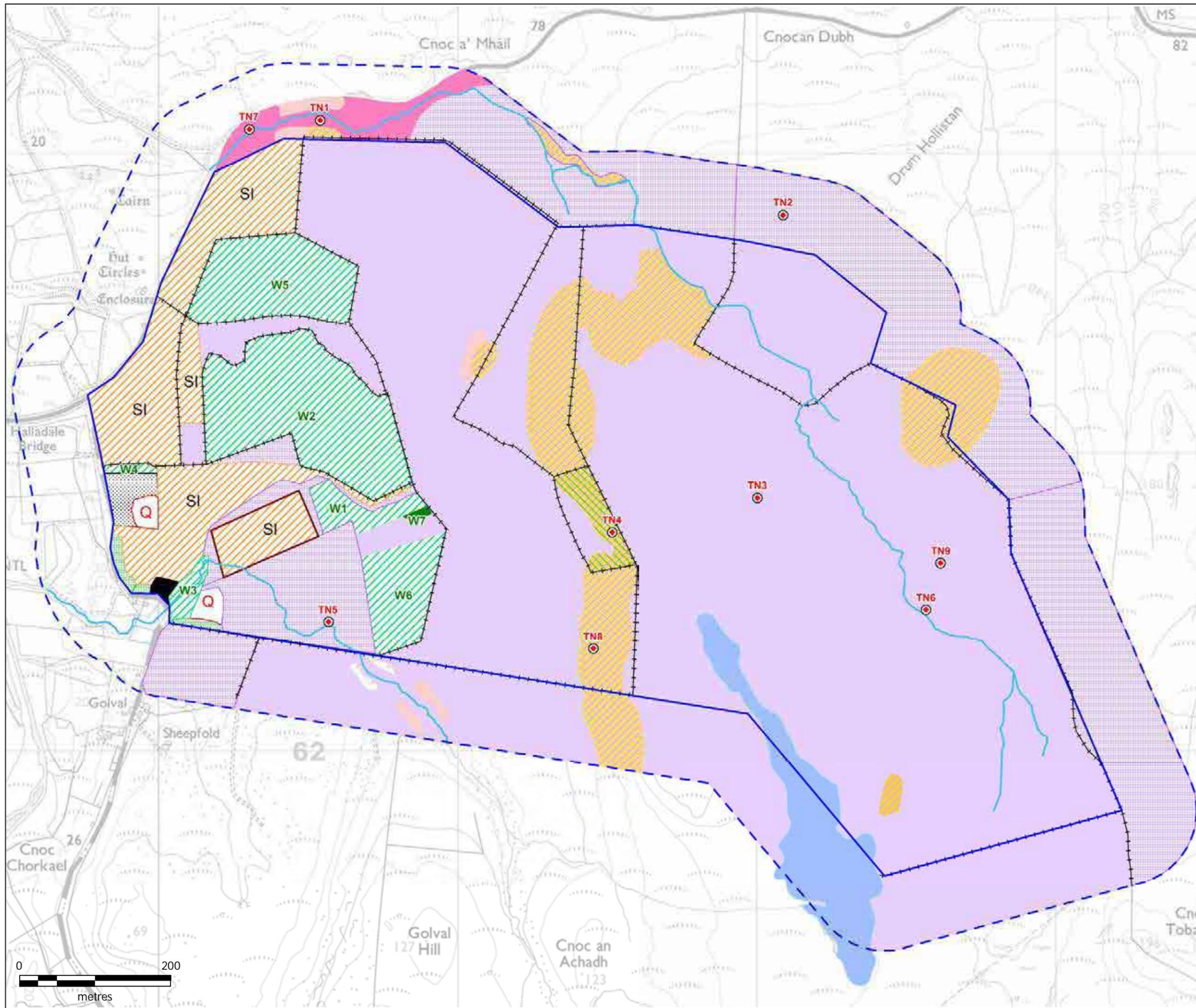
Quadrat	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60
Approximate Peat Depth (cm)	30	>50	>50	20	10	>50	45	>50	>50	>50	>50	>50
Species	DOMIN Scores											
<i>Trichophorum cespitosum</i>	0	0	5	0	0	10	8	8	7	8	8	7
<i>Calluna vulgaris</i>	9	6	7	10	4	4	5	5	5	5	5	5
<i>Sphagnum capillifolium</i>	0	0	7	0	0	4	0	6	7	6	6	7
<i>Cladonia sp.</i>	0	0	0	0	0	5	0	4	4	0	4	4
<i>Molinia caerulea</i>	4	8	7	4	4	4	5	7	4	5	5	4
<i>Hypnum jutlandicum</i>	8	6	4	4	6	0	0	0	0	0	0	0
<i>Erica tetralix</i>	0	4	5	0	5	0	4	5	4	5	4	5
<i>Eriophorum angustifolium</i>	0	0	0	0	4	0	0	5	4	4	5	4
<i>Myrica gale</i>	0	8	7	0	0	0	0	8	6	7	7	0
<i>Eriophorum vaginatum</i>	0	0	4	0	0	0	0	0	0	0	0	0
<i>Sphagnum papillosum</i>	0	0	0	0	0	0	5	0	0	4	4	0
<i>Potentilla erecta</i>	4	4	4	4	0	0	4	4	0	4	4	4
<i>Narthecium ossifragum</i>	0	0	0	0	0	4	4	0	0	4	4	0
<i>Juncus squarrosus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex echinata</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum fallax</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Racomitrium lanuginosum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Melampyrum pratense</i>	0	0	4	0	0	0	0	0	0	4	0	0
<i>Rhytidadelphus loreus</i>	0	0	0	0	4	6	0	0	0	0	0	0
<i>Arctostaphylos uva-ursi</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dosera anglica</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Succisa pratensis</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Drosera rotundifolia</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pleurozia purpurea</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pleurozium schreberi</i>	0	0	0	0	4	0	4	0	0	0	0	0
<i>Deschampsia flexuosa</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranum scoparium</i>	0	0	0	0	4	0	4	0	0	0	0	0
<i>Sphagnum denticulatum</i>	0	0	0	0	7	0	0	0	0	0	0	0
<i>Carex pilulifera</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Empetrum nigrum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pinguicula vulgaris</i> (butterwort)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Betula nana</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Carex nigra</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rubus chamaemorus</i> (cloudberry)	0	0	0	0	6	0	0	0	0	0	0	0
<i>Lophocolea bidentata</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cladonia uncialis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex binervis</i>	2	2	0	0	4	0	0	0	0	0	0	0
<i>Dactylorhiza maculata</i> (heath)	0	1	0	0	0	1	0	1	0	0	0	0
<i>Holcus lanatus</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Plagiothecium undulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula sylvatica</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hylocomium splendens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum subnitens</i>	0	0	0	0	0	0	4	0	0	0	0	0
<i>Galium palustre</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Polytrichum juniperinum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Viola palustris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pulicaris</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Ranunculus repens</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Juncus conglomeratus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Euphrasia sp.</i> (eyebright)	0	4	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum tenellum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula multiflora</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Achillea millefolium</i>	0	0	0	0	4	0	0	0	0	0	0	0
<i>Danthonia decumbens</i>	0	0	0	0	0	0	0	0	0	0	0	0

Table A4.7: NVC survey quadrat data (Q61-72).

Quadrat	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72
Approximate Peat Depth (cm)	>50	>50	40	50	>50	>50	>50	40	40	>50	>50	>50
Species	DOMIN Scores											
<i>Trichophorum cespitosum</i>	8	0	6	7	7	9	9	6	9	9	8	4
<i>Calluna vulgaris</i>	7	7	8	7	9	6	7	7	7	7	4	9
<i>Sphagnum capillifolium</i>	6	6	7	7	9	9	6	9	8	9	8	8
<i>Cladonia sp.</i>	8	0	4	7	4	6	8	7	5	0	0	0
<i>Molinia caerulea</i>	4	7	7	7	4	4	4	5	4	0	7	5
<i>Hypnum jutlandicum</i>	4	4	5	0	6	4	5	4	5	4	0	0
<i>Erica tetralix</i>	6	4	4	4	4	4	5	5	5	5	4	5
<i>Eriophorum angustifolium</i>	6	0	0	4	7	5	0	5	5	7	7	7
<i>Myrica gale</i>	5	5	0	0	5	0	0	0	0	0	8	7
<i>Eriophorum vaginatum</i>	5	4	0	0	4	4	0	6	5	0	0	0
<i>Sphagnum papillosum</i>	4	0	0	0	0	4	0	4	4	0	6	6
<i>Potentilla erecta</i>	4	4	4	4	4	4	4	4	4	0	4	4
<i>Narthecium ossifragum</i>	4	0	0	0	4	0	0	0	0	0	4	0
<i>Juncus squarrosus</i>	0	0	4	4	4	4	5	4	4	5	0	4
<i>Carex echinata</i>	0	4	0	0	0	0	0	0	0	0	4	4
<i>Sphagnum fallax</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Racomitrium lanuginosum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Melampyrum pratense</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rhytiadelphus loreus</i>	0	0	4	0	0	0	4	0	0	0	0	0
<i>Arctostaphylos uva-ursi</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dosera anglica</i>	0	0	0	0	0	4	0	0	0	0	0	0
<i>Succisa pratensis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Drosera rotundifolia</i>	4	0	0	0	0	4	0	0	0	0	0	0
<i>Pleurozia purpurea</i>	0	0	0	0	0	0	0	0	4	4	0	0
<i>Pleurozium schreberi</i>	4	4	0	4	0	0	0	0	0	0	0	0
<i>Deschampsia flexuosa</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranum scoparium</i>	0	4	0	0	0	4	0	0	0	0	0	0
<i>Sphagnum denticulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pilulifera</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Empetrum nigrum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pinguicula vulgaris</i> (butterwort)	0	0	0	0	0	0	0	0	0	0	1	0
<i>Betula nana</i>	0	4	4	0	0	0	0	0	0	0	0	0
<i>Carex nigra</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rubus chamaemorus</i> (cloudberry)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lophocolea bidentata</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cladonia uncialis</i>	0	0	0	0	4	0	4	4	0	0	0	0
<i>Carex binervis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dactylorhiza maculata</i> (heath)	1	1	0	0	1	1	0	1	0	0	0	0
<i>Holcus lanatus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Plagiothecium undulatum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula sylvatica</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Blechnum spicant</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hylocomium splendens</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum subnitens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Galium palustre</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Polytrichum juniperinum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Viola palustris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Carex pulicaris</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ranunculus repens</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Juncus conglomeratus</i>	0	4	0	0	0	0	0	0	0	0	0	0
<i>Euphrasia sp.</i> (eyebright)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sphagnum tenellum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Luzula multiflora</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Achillea millefolium</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Danthonia decumbens</i>	0	0	0	0	0	0	0	0	0	0	0	0

Table A4.8: NVC survey quadrat data (Q73-77).

Quadrat	Q73	Q74	Q75	Q76	Q77
Approximate Peat Depth (cm)	>50	40	30	30	30
Species	DOMIN Scores				
<i>Trichophorum cespitosum</i>	0	0	0	0	0
<i>Calluna vulgaris</i>	5	0	0	0	0
<i>Sphagnum capillifolium</i>	5	0	0	0	0
<i>Cladonia sp.</i>	0	0	0	0	0
<i>Molinia caerulea</i>	6	10	10	7	8
<i>Hypnum jutlandicum</i>	0	6	5	0	5
<i>Erica tetralix</i>	5	0	4	0	4
<i>Eriophorum angustifolium</i>	8	0	4	0	0
<i>Myrica gale</i>	0	0	0	0	0
<i>Eriophorum vaginatum</i>	0	0	0	0	0
<i>Sphagnum papillosum</i>	6	0	0	0	0
<i>Potentilla erecta</i>	4	4	4	4	4
<i>Narthecium ossifragum</i>	4	0	0	0	0
<i>Juncus squarrosus</i>	0	0	0	0	0
<i>Carex echinata</i>	0	0	5	5	6
<i>Sphagnum fallax</i>	0	0	5	7	7
<i>Racomitrium lanuginosum</i>	0	0	0	0	0
<i>Melampyrum pratense</i>	0	0	0	0	0
<i>Rhytiadelphus loreus</i>	0	0	0	0	0
<i>Arctostaphylos uva-ursi</i>	0	0	0	0	0
<i>Dosera anglica</i>	0	0	0	0	0
<i>Succisa pratensis</i>	0	0	5	5	6
<i>Drosera rotundifolia</i>	5	0	0	0	0
<i>Pleurozia purpurea</i>	0	0	0	0	0
<i>Pleurozium schreberi</i>	0	0	0	0	0
<i>Deschampsia flexuosa</i>	0	0	0	5	4
<i>Dicranum scoparium</i>	0	0	0	0	0
<i>Sphagnum denticulatum</i>	0	0	0	0	0
<i>Carex pilulifera</i>	0	0	0	0	0
<i>Empetrum nigrum</i>	0	0	0	0	0
<i>Pinguicula vulgaris</i> (butterwort)	0	0	0	0	0
<i>Betula nana</i>	0	0	0	0	0
<i>Carex nigra</i>	0	0	0	0	0
<i>Rubus chamaemorus</i> (cloudberry)	0	0	0	0	0
<i>Lophocolea bidentata</i>	0	0	0	0	0
<i>Cladonia uncialis</i>	0	0	0	0	0
<i>Carex binervis</i>	0	0	0	0	0
<i>Dactylorhiza maculata</i> (heath)	0	0	0	0	0
<i>Holcus lanatus</i>	0	4	0	0	4
<i>Plagiothecium undulatum</i>	0	0	0	0	0
<i>Luzula sylvatica</i>	0	0	0	4	5
<i>Blechnum spicant</i>	0	0	0	5	0
<i>Blechnum spicant</i>	0	4	4	0	4
<i>Hylocomium splendens</i>	0	0	0	0	0
<i>Sphagnum subnitens</i>	0	0	0	0	0
<i>Galium palustre</i>	0	0	0	4	4
<i>Polytrichum juniperinum</i>	0	0	0	0	0
<i>Viola palustris</i>	0	0	0	0	4
<i>Carex pulicaris</i>	0	0	0	0	0
<i>Ranunculus repens</i>	0	0	0	0	0
<i>Juncus conglomeratus</i>	0	0	0	0	0
<i>Euphrasia sp.</i> (eyebright)	0	0	0	0	0
<i>Sphagnum tenellum</i>	0	0	0	0	0
<i>Luzula multiflora</i>	0	0	0	0	0
<i>Achillea millefolium</i>	0	0	0	0	0
<i>Danthonia decumbens</i>	1	0	0	0	0



Ackron, Caithness

Phase 1 Habitat Plan

Legend

- Land option boundary
- 250m buffer
- Target note (TN)

Habitats

- Broadleaved semi-natural woodland (A1.1.1)
- Coniferous woodland plantation (A1.2.2)
- Mixed woodland plantation (A1.3.2)
- Dense scrub (A2.1)
- Semi-improved acid grassland (B1.2)
- Continuous bracken (C1.1)
- Scattered bracken (C1.2)
- Wet dwarf shrub heath (D2)
- Blanket bog (E1.6.1)
- Wet modified bog (E1.7)
- Acid/neutral flush (E2.1)
- Quarry (I2.1)
- Buildings, domestic (J3.6)
- Bare ground (J4)
- Standing water (G1)
- Running water (G2)
- Fence (J2.4)
- Wall (J2.5)

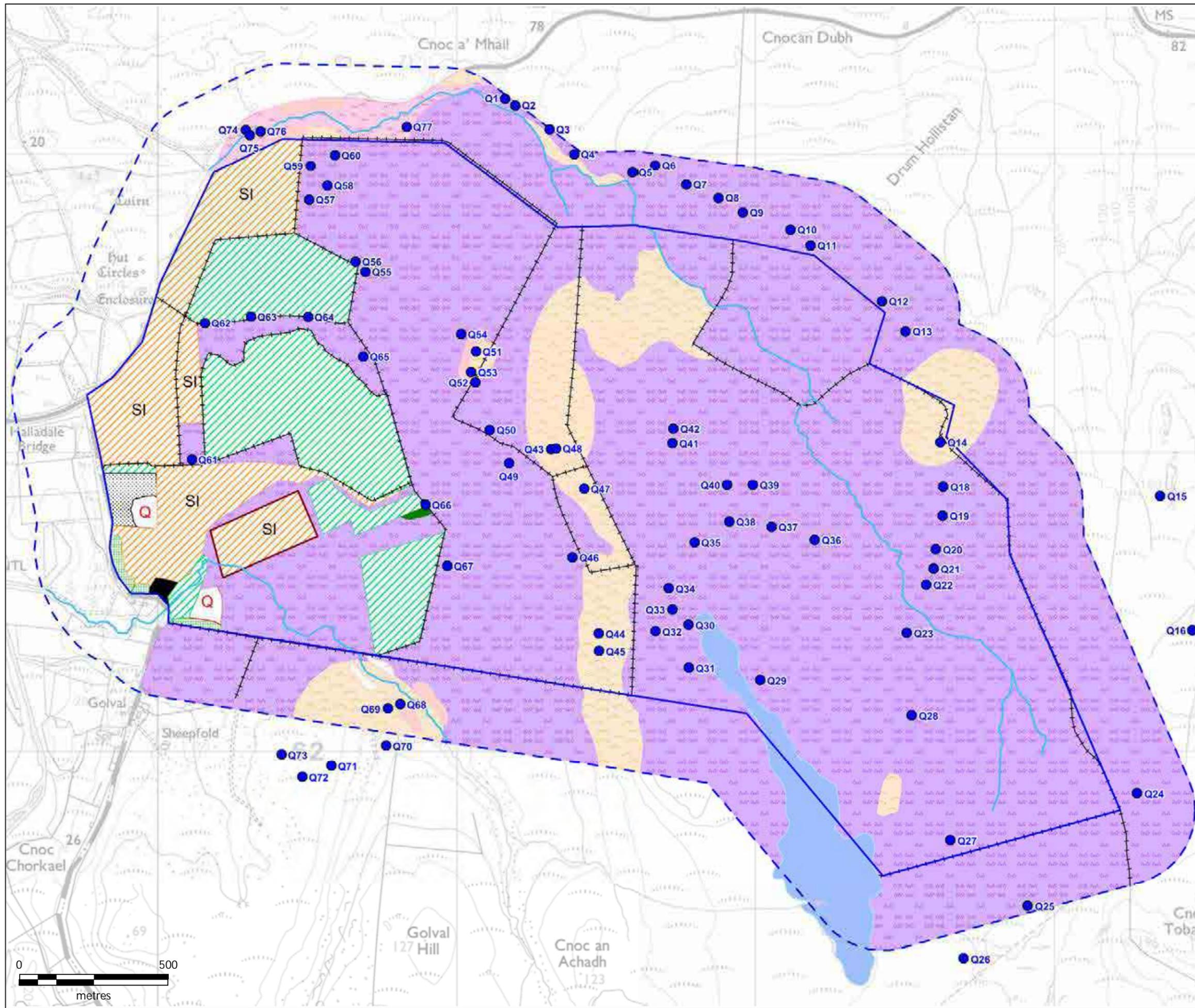
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Ackron, Caithness

NVC Habitat Plan

Legend

- Land option boundary
- 250m buffer
- Quadrat location (Q*)

NVC Habitats

- M15b
Trichophorum cespitosum,
Erica Tetralix
(Wet heath, typical sub community)
- M17b
Trichophorum cespitosum,
Eriophorum vaginatum
(Mire, cladonia sub community)
- M25b
Molina caerulea,
Potentilla erecta
(Mire, Anthoxanthum odoratum sub community)

Other Habitats

- Broadleaved semi-natural woodland (A1.1.1)
- Coniferous woodland plantation (A1.2.2)
- Mixed woodland plantation (A1.3.2)
- Dense scrub (A2.1)
- Semi-improved acid grassland (B1.2)
- Continuous bracken (C1.1)
- Scattered bracken (C1.2)
- Quarry (I2.1)
- Buildings, domestic (J3.6)
- Bare ground (J4)
- Standing water (G1)
- Running water (G2)
- Fence (J2.4)
- Wall (J2.5)

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