

ANNEX B – ATMOS: MOORSHIELD HABITAT & PROTECTED SPECIES
SURVEY REPORT

Technical Report

Moorshield Wind Farm

Extended Phase I Habitat Survey, NVC and
mammal Survey Report

Wind 2 Limited

September 2019



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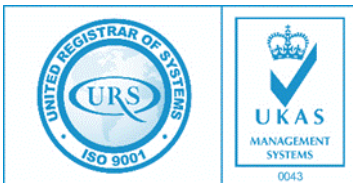
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1 Introduction

1.1 Terms of reference

Wind 2 Limited commissioned Atmos Consulting Ltd (Atmos) to undertake a Phase I habitat and a National Vegetation Classification (NVC) survey for the proposed Moorshield Wind Farm located in East Renfrewshire.

1.2 The proposed development

The proposed development is located approximately 5 km south west of Eaglesham, East Renfrewshire and 10 km north east of Stewarton, East Ayrshire and would consist of three wind turbines with a tip height of up to 149.9 m plus associated infrastructure including turbine foundations, crane hardstandings, onsite access tracks, working areas and substation.

1.3 Objectives

The purpose of this study was to establish the baseline ecological conditions of the proposed development area through identification of any habitats or flora of ecological significance. Additionally, any habitats that could be considered potential groundwater dependent terrestrial ecosystems (GWDTEs) were assessed using National Vegetation Classification (NVC) survey methodology.

This report provides details of the following:

- field survey methodology;
- field survey results;
- description of the plant communities present within the site boundaries;
- discussion of the potential GWDTEs.

2 Methodology

2.1 Phase I habitat survey

A Phase I habitat survey was undertaken by a suitably experienced ecologist on the 24th July 2019. It included the site boundary and an appropriate buffer, where access permitted. A Phase I habitat survey is a standardised method of recording habitat types and characteristic vegetation, as set out in the *Handbook for Phase 1 Habitat Survey – a technique for Environmental Audit* (JNCC, 2010).

Whilst not a full botanical survey, the Phase I method enables a suitably experienced ecologist to undertake a baseline ecological appraisal of the site that:

- Provides a preliminary evaluation of the nature conservation significance of the site and assesses the potential for impacts on habitats/species; and
- Determines the scope of further specialized surveys that may be required.

2.2 National Vegetation Classification

A National Vegetation Classification (NVC) survey was carried out on the 25th July 2019 on areas of the site with comparatively more semi-natural vegetation. Vegetation types present were classified to community and, where feasible, sub-community using the NVC classification system developed by Rodwell et al. (1991a, et seq.). Where the vegetation was not classifiable under the NVC system, it was either classified using the Joint Nature Conservation Committee (JNCC) Phase I Habitat classification (JNCC, 2010), or assigned a new identifier (e.g. 'Je' for acid rush-pasture without Bog-mosses (*Sphagna*); see Averis et al., 2004).

2.3 Ground Water Dependent Terrestrial Ecosystems

As groundwater-dependent terrestrial ecosystems (GWDTEs), which are types of wetland, are specifically protected under the Water Framework Directive (WFD), all wetland habitats recorded during the NVC survey were evaluated in terms of their potential to be groundwater-dependent. This was done based on the hydrogeological setting of each NVC community identified, and with reference to Scottish Environment Protection Agency (SEPA) guidance (SEPA, 2014).

In addition, peatland habitats such as blanket bog were also highlighted, due to their conservation interest and their importance to the development design process.

2.1 Protected mammal survey

The site was also surveyed for the presence of any protected mammal species on the 24th July 2019. These surveys were carried out during suitable weather conditions by a suitably experienced ecologist using the accepted methodologies described below.

2.1.1 Otter

A survey for otter was carried out using the methodology described in the *Otters and River Habitat Management Handbook* (1993) and involved a thorough search for any signs of otter activity, including holts and couches, spraints, footprints, pathways and slides into the water. The location of any evidence of otter activity was georeferenced

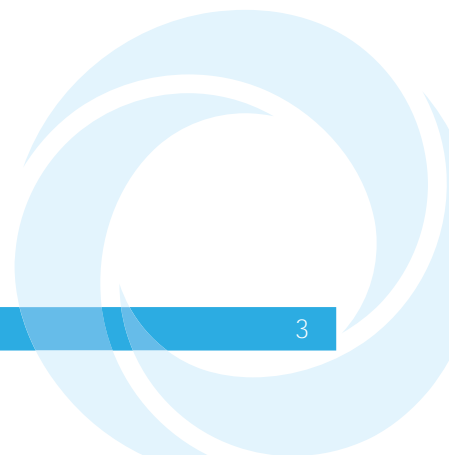
during the survey. This survey focused on the margins of Bennan Loch and the minor watercourses found in the survey area.

2.1.2 Water vole

A survey for water vole was carried out of the survey area. The methods were based on the guidance given in the *Water Vole Conservation Handbook* (Strachan *et al.*, 2011). The surveyed waterbodies/courses were examined for signs of water vole presence, including droppings, burrows, feeding stations, further foraging signs, footprints and pathways. This survey focused on the margins of Bennan Loch and the minor watercourses found in the survey area.

2.1.3 Badger

A badger survey was carried out on the survey area and followed the methodology described by Harris *et al.* (1989). The survey involved a visual search for further badger setts and other evidence of badger presence such as feeding signs, latrines, hairs, footprints, and runways through vegetation.



3 Phase I Habitat Results

3.1 Habitats

The Phase I habitats recorded on the site and in the surrounding area are described below. Images and target notes are provided in Appendix A and Figure 1 shows the locations of target notes and the extent of each habitat type.

3.1.1 Wet heath/acid grassland mosaic

A large proportion of the site is comprised of wet heath/acid grassland mosaic. It was noted during the survey that areas of wet heathland vegetation are drying out, likely due to drainage and grazing, and so showed signs of close affinities to acid grassland.

3.1.2 Blanket bog

There are areas of blanket bog habitat on the southern side of the road that lies off-site to the south of the site (B764) and another area of this habitat on the western side of the site. There is also a smaller area of blanket bog to the east of the site.

There is a large area of blanket bog located in the western side of the site. This blanket bog is degraded with multiple ditches drying out the peat surface. Deer grass *Trichophorum caespitosum* is dominant with sphagnum (*S. Capillifolium* frequent and *S. papillosum* frequent but patchy). The sphagnum *S. magellanicum* was rare and restricted to the wettest hollows (TN18).

Further north east within the same patch of blanket bog, there is evidence active drainage and management resulting in a widespread drying out. Some elements of this habitat still exist in small areas, which are deer grass dominated with few dwarf shrubs. The bog vegetation has been replaced by heath rush *Juncus squarrosus* which dominates on the tops of drier areas. Extensive bare peat was noted throughout which is drying the peat surface as well as over grazing of vegetation (TN19).

The blanket bog off-site to the south of the site is degraded with multiple ditches drying out the peat surface. This area still retains characteristic of blanket bog habitat, with heather *Calluna vulgaris*, cross-leaved heath *Erica tetralix*, bilberry *Vaccinium myrtillus* and wavy hair grass *Deschampsia flexuosa* frequent. The cover of *Sphagnum* spp is infrequent and scattered (TN2).

3.1.3 Semi-improved neutral grassland

There a number of enclosed semi-improved grassland fields to the north of the site. These support species such as perennial ryegrass *Lolium perenne* and crested dog's-tail *Cynosurus cristatus* (TN10). There is also an area of grassland to the north dominated by wavy hair grass and with oval sedge *Carex ovalis* frequent (TN13).

3.1.4 Marsh/marshy grassland

There are a number of areas of marshy grassland found across the site and in the surrounding off-site habitats. This includes stands of the habitat to the north east (TN8),

north (TN12) and towards the west of the site (TN17) which are largely dominated by soft rush *Juncus effusus*. There is also an area of marshy grassland surrounding a bog pool located towards the southern end of the site (TN4) and off-site to the south of the road alongside a stream (TN1).

3.1.5 Acid/neutral flush

There is a *Sphagnum* spp dominated flush located in a water-logged erosion channel (TN16).

3.1.6 Dry heath/acid grassland mosaic

There is an area of heath rush dominated grassland in the western half of the site that is on deep peat but erosion from active drainage and grazing has dried the surface of the peat. There are erosional channels frequent throughout (TN15).

3.1.7 Arable

A single arable field is located to the north of the site and was newly sown with shoots of crops showing at the time of the survey (TN11).

3.1.8 Basin mire

There is an area of basin mire fen located towards the centre of the site (TN5). This comprises swamp vegetation dominated by bottle sedge *Carex rostrata* and with some willow *Salix* spp also present. There are also stands of scrub surrounding this area of habitat.

3.1.9 Running water

There are a number of watercourses running across the site, including a stream that crosses the centre of the site named Soame Burn (TN8). There is also a further watercourse off-site to the south (TN1).

3.1.10 Standing water

There is a large reservoir to the north that is known as Bennan Loch. There was little marginal vegetation recorded within the survey area (TN9).

3.2 Off-site habitats

3.2.1 Bare ground

There is an area of bare ground with loose gravel off-site to the east of the site (TN21) which is a car passing place for the road (B764).

3.2.2 Non-native invasive species

There is a stand of Japanese knotweed *Fallopia japonica* growing on the roadside off-site to the south of the site (TN3).

4 NVC and GWDTE Results

The following NVC communities were recorded within the site and are mapped in Figure 2. A list of the species recorded in each quadrat and their abundance (using the Domin scale) are provided in Appendix B.

Of the NVC communities recorded on site, four have the potential to be groundwater dependent terrestrial ecosystems (GWDTE). These are mapped in Figure 3.

4.1 NVC Communities

4.1.1 M2b – *Sphagnum cuspidatum/fallax* bog pool community (*Sphagnum fallax/cuspidatum* sub-community)

One small pool located at grid reference NS 52119 48942 was found in the southern half of the site. No quadrats were set up for this community as the bog pool edges were near vertical and allowed little to no marginal vegetation, however *Sphagnum fallax* and *S. cuspidatum* were both present. The bulk of the vegetation was located in the centre of the pool surrounded entirely by open water, so could only be viewed from a distance, the species were no doubt a mix of *S. fallax* and *S. cuspidatum* however. Soft rush was present in small quantity growing through the *Sphagnum* in the middle of the pool also. This bog pool was likely formed when the surrounding habitat was blanket bog, it is now a mix of M23 and U2 grassland.

4.1.2 M4 – *Carex rostrata* – *Sphagnum fallax* mire

A small area of mire vegetation with affinity to the M4 community was recorded in the centre of the site. This was typified by a cover of sedges over a carpet of *Sphagnum* spp. The presence of soft rush was likely to be indicative of grazing pressure.

4.1.3 M6 – *Carex echinata* - *Sphagnum fallax* mire

Two sub-communities were found within the survey area:

- M6c - *Carex echinata* - *Sphagnum fallax* mire (*Juncus effusus* sub-community)
- M6d - *Carex echinata* - *Sphagnum fallax* mire (*Juncus acutifloris* sub-community)

The distinction between the two sub-communities was not always clear as the two communities graded into one another with limited distinction at times. These mires were found to occur in valley bottoms often surrounding watercourses where water dissipated over the ground and remained wet throughout much of the year. *Sphagnum palustre* and *Sphagnum fallax* were the most dominant bryophytes with one quadrat containing *Sphagnum magellanicum*, but this is likely to be from a transition from blanket bog to mire. The largest areas of this habitat were found surrounding the watercourse that feeds into Bennan Loch.

4.1.4 M15b - *Trichopherum cespitosum* - *Erica tetralix* wet heath (typical sub-community)

One sub-community was recorded in one area in the north east of the site which extended off-site. This habitat was a very poor fit into the M15b community and is not

representative of typical M15b community, owing to a series of drainage ditches surrounding and cutting through the heath drying out the peat layer allowing more grasses such as wavy hair grass *Deschampsia flexuosa* to grow with much higher frequency than is typical. Mat grass *Nardus stricta* was also found to be growing throughout the community, though often in low frequency and not forming clumps or hummocks. Mat grass is not a species that is associated with M15b, but represents a transition from heath to dry grassland as a result of drainage and over grazing. Species found that are typical of the M15b community were present in good number also including deer grass, common haircap moss *Polytrichum commune* and patchy but frequent *Sphagnum capillifolium*. Cross-leaved heath *Erica tetralix* was also present but only in small quantities.

4.1.5 M17 - *Trichopherum cespitosum* - *Eriophorum vaginatum* blanket mire

The blanket bog in the west of the site is in poor condition and is not a good example of its type. *Sphagnum papillosum* is frequent but the active drainage regimes on site have lowered the water table on the peatland to a point where *S. magellanicum* occurs only in small amounts in the wettest areas. Significant erosion is also present on a wide scale due to both drainage and over-grazing. This has resulted in large areas of bare peat throughout many parts of the blanket bog.

Where there have been fewer artificial drains installed, the habitat is closer to type and these areas correspond to M17a - *Trichopherum cespitosum* - *Eriophorum vaginatum* blanket mire (*Drosera rotundifolia* - *Sphagnum* spp. Sub-community).

A large U6/M17 mosaic has been marked on the map with sphagnum present only in small depressions, this area is not considered to be still active.

Only active blanket bogs can have priority status as Annex 1 habitats, and much of the M17 habitat on site is still active. The term "active" refers to blanket bogs that have the capability to form peat, this is done primarily through decaying *Sphagnum* species. *Sphagnum papillosum* and *S. magellanicum* are considered primary peat building mosses, others including *S. fuscum*, *S. beothuk* and *S. austinii* are also important in this respect but are more typical of undisturbed peatland habitats and were not recorded during the current surveys.

4.1.6 M23 - *Juncus effusus/acutiflorus* - *Galium palustre* rush pasture

There were large areas of this habitat type recorded throughout the survey area. Both sub-communities were recorded in the survey area:

- M23a - *Juncus effusus/acutiflorus* - *Galium palustre* rush pasture (*Juncus acutiflorus* sub-community)
- M23b - *Juncus effusus/acutiflorus* - *Galium palustre* rush pasture (*Juncus effusus* sub-community)

The main difference between the two sub-communities are the dominance of either soft rush *Juncus effusus* or hard rush *J. acutiflorus*, however both can occur in the same stand, though one species is normally more dominant than the other. Species other than the two dominant rushes were not exclusive to either community. Yorkshire fog *Holcus lanatus* was the most frequent grass with sweet vernal grass *Anthoxanthum*

odoratum. Bent grass *Agrostis canina* subsp. *canina* was occasional as was creeping soft-grass *Holcus mollis*.

4.1.7 MG6b – *Lolium perenne* – *Cynosurus cristatus* grassland (*Anthoxanthum odoratum*) sub-community

The northern part of the site was dominated by enclosed grassland fields showing signs of management and nutrient enrichment.

4.1.8 U2b – *Deschampsia flexuosa* grassland (*Vaccinium myrtillus* sub-community)

The southern part of the site was dominated by a grassland with some heathland species and thus showed affinity to the U2b community.

4.1.9 U5b – *Nardus stricta* – *Galium saxatile* grassland (*Agrostis canina* – *Polytrichum commune* sub-community)

This grassland was only recorded in part of the eastern corner of the site, and was more extensive off-site to the east.

4.1.10 U6 – *Juncus squarrosus* – *Festuca ovina* grassland

This habitat was found in the north east of the site on peaty substrates that were once blanket bog but due to drainage and over-grazing have become degraded. This has allowed the peat surface to dry out which allows species such as heath rush to grow. Mat grass was frequent in areas that did not occur on deep peat.

4.1.11 Off-site NVC Communities

4.1.12 M19 - *Calluna vulgaris* - *Eriophorum vaginatum* blanket mire

This habitat was recorded only in the buffer on the southern side of the site. The habitat has a network of artificial drains which have been largely re-vegetated, though still actively collecting and carrying water. The habitat is in unfavourable condition but is currently considered active, though the sphagnum cover is patchy and peat building mosses are infrequent throughout the area. Unlike the M17 habitat, grazing is less of an issue in the M19 community and the damage from grazing seems to be minimal.

4.1.13 MG9 - *Holcus lanatus* – *Deschampsia cespitosa* grassland

There was one small area of this habitat located off-site to the north of the site. The community was dominated by tall clumps of tufted hair-grass *Deschampsia cespitosa* with Yorkshire fog frequent in the lower sward. This community was rich in other grasses such as velvet bent *Agrostis capillaris*, mat grass and sweet vernal grass. Sedge species were also well represented with oval sedge and star sedge *Carex echinata* both found.

4.2 GWDTEs

Of the NVC communities recorded on-site, the following have the potential to be GWDTEs:

- M6c and M6d (high potential)

- M15b (moderate potential)
- M23a and M23b (high potential)
- M6 (moderate potential)

5 Protected Mammal Species

5.1 Protected mammals

The results of the protected mammal survey are presented in Figure 4, with target notes in Appendix A.

5.1.1 Otter

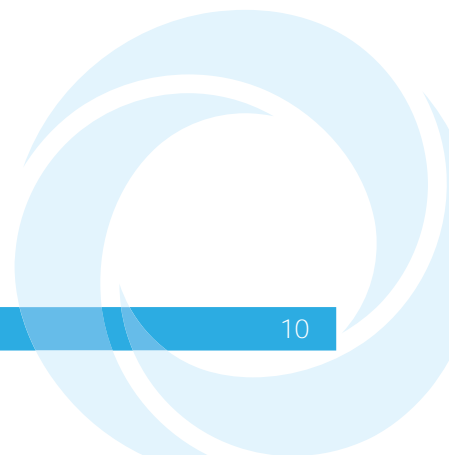
There were three otter spraints identified in the survey area. All of these were dry and intact (TN6 and TN7) and located on the southern shore of the Bennan Loch reservoir that lies to the north of the site. Two of these were located on a prominent boulder. There were no otter holts or couches identified during the survey, however otters are obviously present in the area and may forage and commute through the site.

5.1.2 Water vole

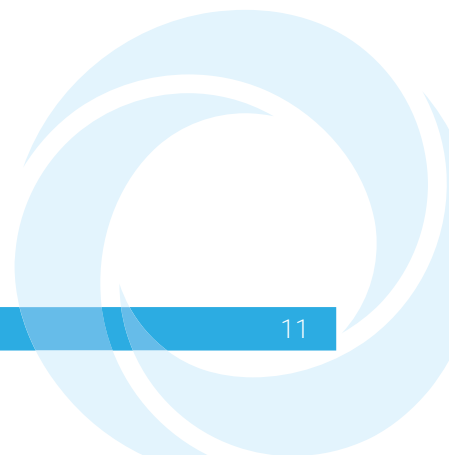
The site is considered to have some suitability for water vole, particularly along some of the watercourses that run through the site and provide suitable banks for burrowing and sources of food such as marginal vegetation. However, there were no signs of water vole identified during the survey and it is considered unlikely that they are currently present on the site.

5.1.1 Badger

There were no signs of badger or badger setts identified during the survey. It is therefore considered unlikely that they are present on the site but may range across it to forage from off-site setts.



6 Figures



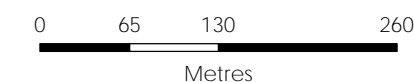
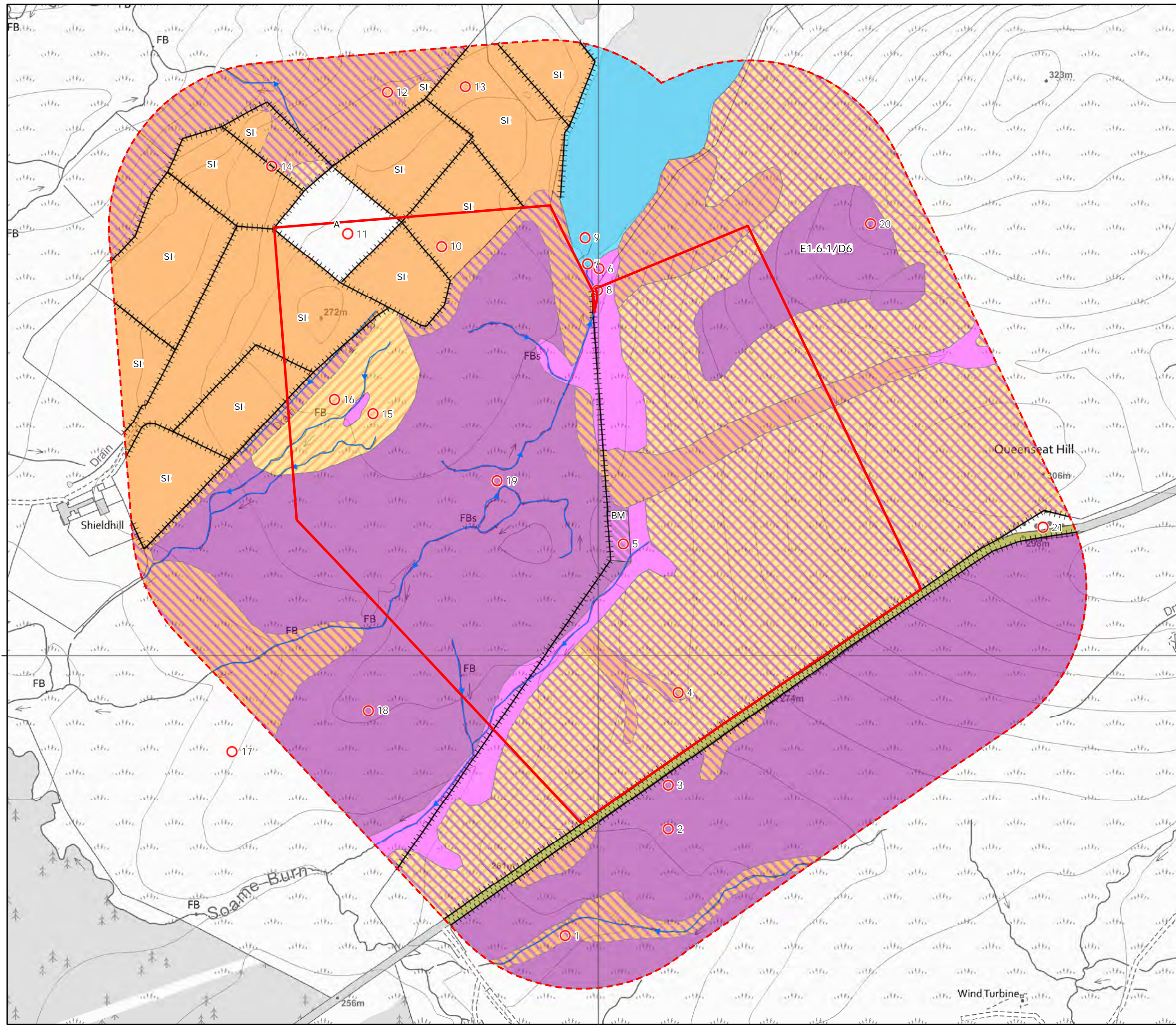
Moorshield Wind Farm



Phase 1 Habitat Survey Results

Key

- Development boundary
- Survey area
- Target Note
- Running water
- Fence
- Neutral grassland - semi-improved
- Marsh/marshy grassland
- Dry heath/acid grassland
- Wet heath/acid grassland
- Blanket sphagnum bog
- Flush and spring - acid/neutral flush
- BM Fen - basin mire
- Standing water
- A Cultivated/disturbed land - arable
- Bare ground
- Track



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1:5,500



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Moorshield Wind Farm



NVC Habitat Survey Results

Key

Development boundary

Survey area

Dominant NVC Community

MG6b

MG9

M4

M6c

M6d

M15b

M17

M17a

M19

M23

M23a

M23b

U2b

U5b

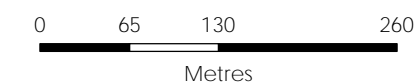
U6b

Open water

Road

Bare ground

Not surveyed



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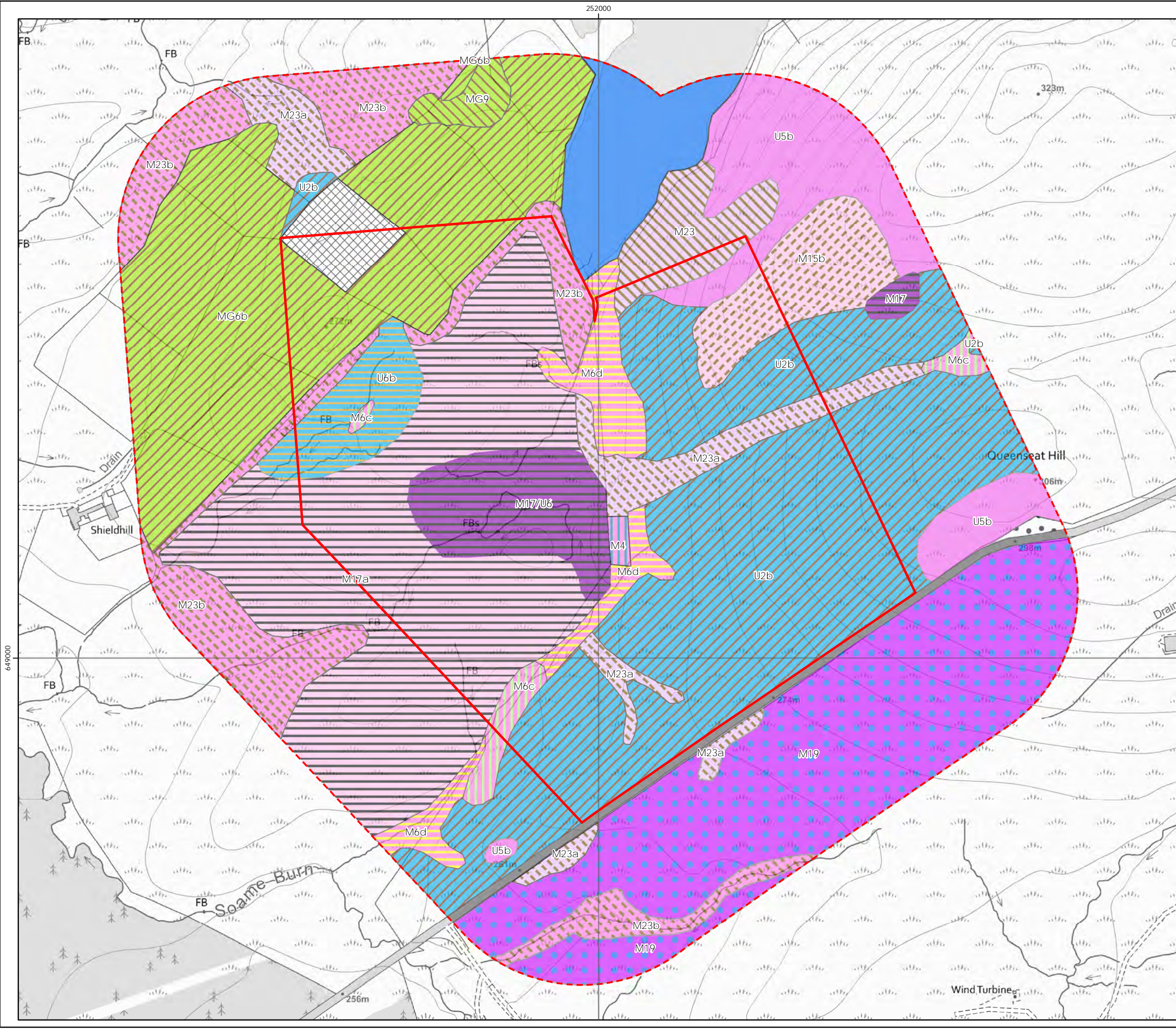


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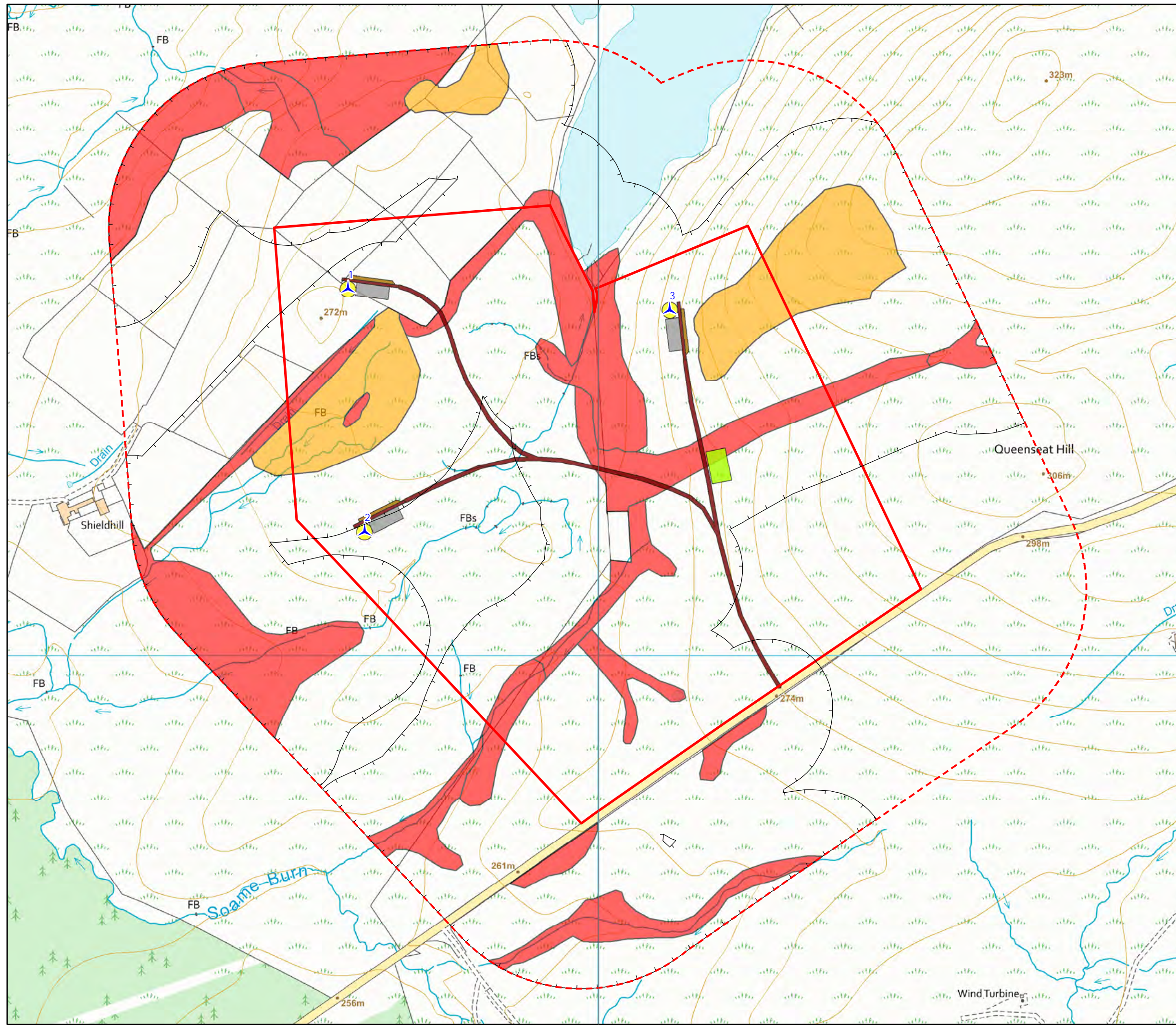
Moorshield Wind Farm

wind2

GWDTEs

Key

- Development boundary
 - NVC survey area
 - ▲ Proposed turbine
 - Turbine foundation
 - Crane hardstanding
 - Onsite access track
 - Working area
 - Substation
- GWDTEs
- Moderately dependent
 - Highly dependent
 - 100m buffer of GWDTEs



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0 50 100 200
Metres



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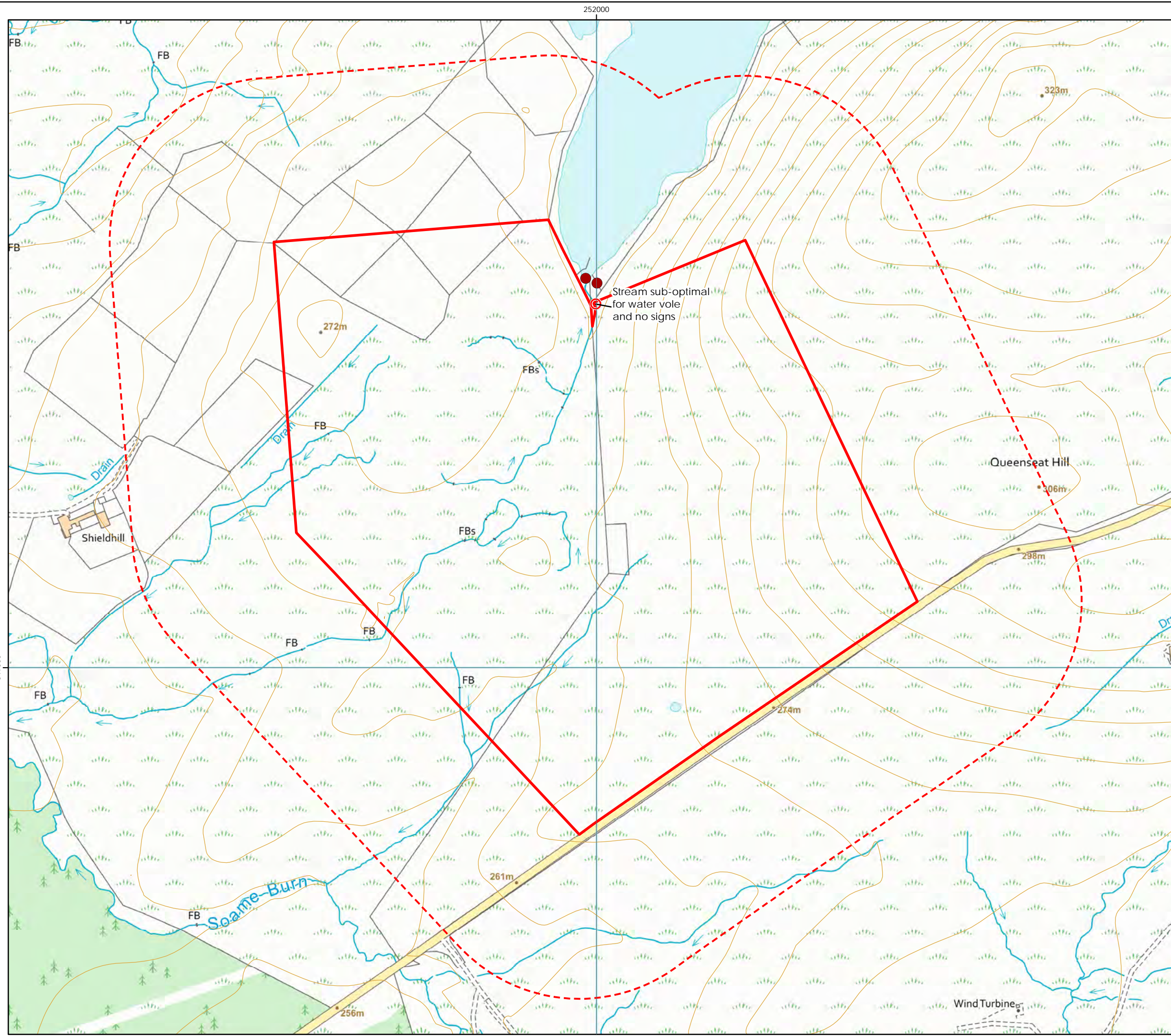
Moorshield Wind Farm

wind2

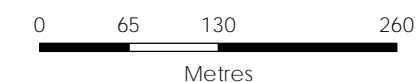
Protected Mammal Survey Results

Key

-  Development boundary
-  Survey area
-  Target Note
-  Otter spraint



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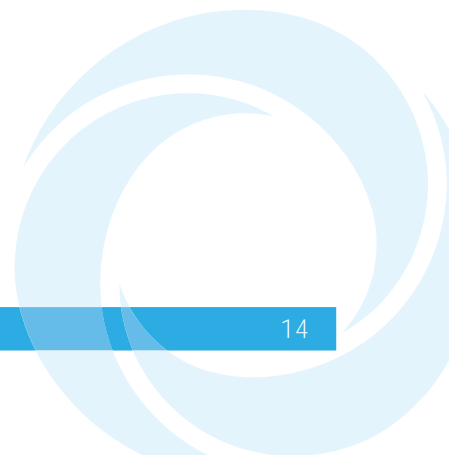
Appendices

Appendix A. Target notes and images

Target note	Grid reference	Image
TN1. Marshy grassland surrounding stream. Stream 1-2m wide and flowing west at a slow to medium pace	NS 51950 48576	
TN2. Blanket bog - degraded with multiple ditches drying out peat surface. Still retains character of blanket bog with <i>Calluna vulgaris</i> , <i>Erica tetralix</i> , <i>Vaccinium myrtillus</i> and <i>Dechampsia flexuosa</i> frequent. Sphagnum cover is infrequent and patchy.	NS 52106 48738	
TN3. Japanese knotweed growing by roadside, approx. 3-4m in length and 2m wide.	NS 52106 48804	
TN4. Bog pool approx. 3-4m by 3-4m. Centre of pool dominated by <i>Sphagnum</i> , not accessible for identification but looks to be <i>S. cuspidatum</i> and <i>S. fallax</i> . Margins of bog pool dominated by <i>S. fallax</i>	NS 52121 48944	
TN5. Swamp vegetation dominated by <i>Carex rostrata</i> . Some <i>Salix</i> spp. Scrub surrounding the habitat also.	NS 52038 49169	
TN6. Otter spraint - dried intact x 1	NS 52001 49585	
TN7. Otter spraint - dried intact x 2 on prominent boulder	NS 51984 49592	
TN8. Stream with marshy grassland - checked for water vole but no signs - sub-optimal habitat	NS 51999 49553	

Target note	Grid reference	Image
TN9. Large reservoir, Bennan Loch. Little marginal vegetation within the survey area.	NS 51980 49632	
TN10. Neutral grassland - semi-improved with <i>Lolium perenne</i> , <i>Cynosurus cristatus</i> dominant	NS 51763 49619	
TN11. Newly sown field, shoots of crop showing but un-identified	NS 51621 49638	
TN12. <i>Juncus effusus</i> dominated marshy grassland		
TN13. <i>Deschampsia cespitosa</i> dominated grassland, <i>Carex ovalis</i> frequent	NS 51799 49860	
TN14. Dry stone wall.	NS 51506 49740	
TN15. <i>Juncus squarrosus</i> dominated grassland - on deep peat but erosion from active drainage and grazing has dried the surface of the peat layer. Erosional channels frequent through.	NS 51659 49366	
TN16. <i>Sphagnum</i> dominated flush - located in water logged erosional channel	NS 51601 49387	

Target note	Grid reference	Image
TN17. Marshy grassland - <i>J. effusus</i> dominated	NS 51446 48855	
TN18. Blanket bog - degraded with multiple ditches drying out peat surface. <i>Trichopherum</i> dominant with <i>Sphagnum capillifolium</i> frequent and <i>S. papillosum</i> also frequent but patchy. <i>Sphagnum magellanicum</i> rare and restricted to wettest hollows.	NS 51652 48917	
TN19. Past blanket bog - though some elements of this habitat still exist in small areas. <i>Trichophorum</i> dominated, few dwarf shrubs. <i>Juncus squarrosus</i> dominated on the tops of drier areas. Extensive peatland damage to site with both past and currently active drainage management causing major damage to peatland. Extensive bare peat throughout, severe drying of peat surface and over grazing of vegetation.	NS 51847 49264	
TN20. Some wet heath type vegetation. Drying out due to drainage and grazing - showing signs of close affinities to acid grassland	NS 52412 49653	
TN21. Bare ground - car passing place with loose gravel	NS 52673 49194	



Appendix B. NVC Quadrat Results

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

Habitat number/description: M23 - <i>Juncus effusus/acutiflorus</i> - <i>Galium palustre</i> rush pasture					
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5
Grid reference	NS 52125 49256	NS 51973 49530	NS 51554 49777	NS 51610 49799	NS 51219 48991
<i>Deschampsia flexuosa</i>	5	-	-	-	-
<i>Deschampsia cespitosa</i>	-	2	5	2	-
<i>Anthoxanthum odoratum</i>	-	5	4	3	2
<i>Festuca ovina</i>	-	-	-	-	3
<i>Holcus lanatus</i>	5	7	7	6	6
<i>Carex nigra</i>	-	-	-	2	-
<i>Juncus acutiflorus</i>	9	5	8	2	3
<i>Epilobium palustre</i>	5	-	2	3	2
<i>Cirsium palustre</i>	4	-	4	2	-
<i>Calliergonella cuspidata</i>	4	-	-	-	3
<i>Ranunculus repens</i>	3	-	3	-	-
<i>Luzula multiflora</i>	-	-	-	-	2
<i>Aulacomnium palustre</i>	-	-	-	-	-
<i>Galium palustre</i>	4	-	4	3	2
<i>Holcus mollis</i>	3	-	-	-	-
<i>Juncus effusus</i>	4	9	-	8	9
<i>Agrostis cannina</i> subsp. <i>cannina</i>	-	7	7	-	-
<i>Ranunculus acris</i>	-	5	-	2	-
<i>Trifolium repens</i>	-	5	5	-	-
<i>Carex ovalis</i>	-	-	4	-	-

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

Habitat number/description: M19 - <i>Calluna vulgaris</i> - <i>Eriophorum vaginatum</i> blanket mire					
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5
Grid reference	NS 51894 48636	NS 52101 48750	NS 52238 48882	NS 52333 48932	NS 52582 49112
<i>Deschampsia flexuosa</i>	8	6	7	5	8
<i>Molinia caerulea</i>	6	5	4	5	6
<i>Eriophorum vaginatum</i>	5	3	-	4	3

Habitat number/description: M19 - <i>Calluna vulgaris</i> - <i>Eriophorum vaginatum</i> blanket mire					
<i>Eriophorum angustifolium</i>	-	-	2	-	-
<i>Trichophorum cespitosum</i>	2	-	2	-	-
<i>Erica tetralix</i>	5	-	4	3	-
<i>Calluna vulgaris</i>	4	5	7	6	6
<i>Polytrichum strictum</i>	-	3	-	4	-
<i>Potentilla erecta</i>	5	3	4	4	4
<i>Aulacomnium palustre</i>	-	4	-	-	-
<i>Sphagnum palustre</i>	-	-	3	2	-
<i>Narthecium ossifragum</i>	-	2	2	-	2
<i>Sphagnum capillifolium</i>	-	4	-	3	-
<i>Vaccinium myrtillus</i>	7	6	7	6	6
<i>Hypnum jutlandicum</i>	4	-	5	-	4
<i>Polytrichum commune</i>	5	3	5	4	4
<i>Pleurozium schreberi</i>	5	3	5	4	6

M17a - *Trichophorum cespitosum* – *Eriophorum vaginatum* blanket mire
(*Drosera rotundifolia* – *Sphagnum* spp. sub-community)

Habitat number/description: M17a - <i>Trichophorum cespitosum</i> - <i>Eriophorum vaginatum</i> blanket mire (<i>Drosera rotundifolia</i> - <i>Sphagnum</i> spp. Sub-community)						
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5	Quadrat 6
Grid reference	NS 51892 49519	NS 51811 49515	NS 51627 49343	NS 51564 49173	NS 51638 49109	NS 51914 49169
<i>Deschampsia flexuosa</i>	4	5	5	5	4	4
<i>Molinia caerulea</i>	5	5	-	7	5	-
<i>Eriophorum vaginatum</i>	4	4	6	6	7	6
<i>Eriophorum angustifolium</i>	4	-	-	-	-	4
<i>Trichophorum cespitosum</i>	9	8	-	8	8	9
<i>Erica tetralix</i>	-	-	-	5	5	6
<i>Calluna vulgaris</i>	-	-	-	5	-	5
<i>Polytrichum strictum</i>	5	5	8	5	5	4
<i>Potentilla erecta</i>	4	4	5	4	4	-
<i>Sphagnum cuspidatum</i>	5	-	-	-	-	-

Habitat number/description: M17a - <i>Trichophorum cespitosum</i> - <i>Eriophorum vaginatum</i> blanket mire (<i>Drosera rotundifolia</i> - <i>Sphagnum</i> spp. Sub-community)						
<i>Aulacomnium palustre</i>	4	4	5	-	-	-
<i>Sphagnum palustre</i>	4	-	-	-	-	-
<i>Narthecium ossifragum</i>	4	4	-	-	5	6
<i>Sphagnum capillifolium</i>	4	5	6	6	5	5
<i>Juncus squarrosus</i>	-	2	-	-	-	-
<i>Vaccinium myrtillus</i>	4	4	-	5	-	-
<i>Hypnum jutlandicum</i>	4	4	-	-	-	-
<i>Polytrichum commune</i>	-	5	4	-	-	-
<i>Sphagnum papillosum</i>	-	-	5	5	7	4
<i>Drosera rotundifolia</i>	2	-	4	4	4	-
<i>Sphagnum magellanicum</i>	-	-	5	5	7	-
<i>Vaccinium oxycoccos</i>	-	-	-	4	4	-
<i>Racomitrium lanuginosum</i>	-	-	-	-	-	4

M15b *Trichophorum cespitosum* – *Erica tetralix* wet heath (typical sub-community)

Habitat number/description: M15b - <i>Trichophorum cespitosum</i> - <i>Erica tetralix</i> wet heath (typical sub-community)					
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5
Grid reference	NS 52280 49615	NS 52386 49662	NS 52413 49748	NS 52334 49733	NS 52509 49770
<i>Deschampsia flexuosa</i>	8	7	6	5	4
<i>Molinia caerulea</i>	5	5	4	5	5
<i>Anthoxanthum odoratum</i>	4	5	4	-	
<i>Eriophorum vaginatum</i>	-	-	2	-	2
<i>Eriophorum angustifolium</i>	-	3	1	-	1
<i>Trichophorum cespitosum</i>	5	5	2	4	3
<i>Erica tetralix</i>	-	2	-	-	3
<i>Festuca ovina</i>	3	2	-	3	4
<i>Carex nigra</i>	4	4	2	-	-

Habitat number/description: M15b - <i>Trichopherum cespitosum</i> - <i>Erica tetralix</i> wet heath (typical sub-community)					
<i>Potentilla erecta</i>	-	2	-	2	2
<i>Hypnum jutlandicum</i>	4	-	-	4	-
<i>Vaccinium myrtillus</i>	5	4	4	3	4
<i>Narthecium ossifragum</i>	-	-	-	2	-
<i>Polytrichum strictum</i>	-	-	-	-	3
<i>Pleurozium schreberi</i>	5	4	3	4	4
<i>Sphagnum capillifolium</i>	-	5	-	-	3
<i>Polytrichum commune</i>	5	5	4	3	5
<i>Galium saxatile</i>	4	4	3	2	4
<i>Luzula multiflora</i>	3	4	2	3	-
<i>Rhynchospora squarrosus</i>	4	4	5	2	3
<i>Nardus stricta</i>	8	4	6	5	4
<i>Juncus conglomeratus</i>	-	-	4	-	-
<i>Juncus squarrosus</i>	-	4	-	2	-
<i>Agrostis cannina</i>	-	3	2	-	4

U2b – *Deschampsia flexuosa* grassland (*Vaccinium myrtillus* sub-community)

Habitat number/description: U2b - <i>Deschampsia flexuosa</i> grassland (<i>vaccinium myrtillus</i> sub-community)					
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5
Grid reference	NS 51784 48700	NS 51902 48725	NS 52227 49116	NS 52294 49212	NS 52231 48995
<i>Deschampsia flexuosa</i>	7	7	7	7	8
<i>Molinia caerulea</i>	2	2	4	4	4
<i>Anthoxanthum odoratum</i>	-	2	5	5	2
<i>Eriophorum vaginatum</i>	5	5	5	5	5
<i>Eriophorum angustifolium</i>	2	-	-	-	-
<i>Trichopherum cespitosum</i>	7	-	-	-	5
<i>Festuca ovina</i>	-	5	4	4	-
<i>Nardus stricta</i>	-	4	-	-	-
<i>Potentilla erecta</i>	7	5	5	5	6
<i>Polytrichum commune</i>	5	5	4	5	4
<i>Polytrichum strictum</i>	4	-	-	-	4

Habitat number/description: U2b - <i>Deschampsia flexuosa</i> grassland (<i>vaccinium myrtillus</i> sub-community)					
<i>Pleurozium schreberi</i>	5	5	8	6	5
<i>Hypnum jutlandicum</i>	5	4	3	4	2
<i>Aulacomnium palustre</i>	4	-	-	-	-
<i>Sphagnum fallax</i>	2	-	-	5	5
<i>Sphagnum magellanicum</i>	4	-	-	-	-
<i>Galium saxatile</i>	2	2	2	2	2
<i>Sphagnum cappillifolium</i>	4	5	-	-	-
<i>Juncus effusus</i>	-	4	1	5	-
<i>Juncus squarrosus</i>	-	4	4	4	-
<i>Vaccinium myrtillus</i>	3	-	5	4	5
<i>Vaccinium oxycoccos</i>	-	-	-	-	4

MG6b – *Lolium perenne* – *Cynosurus cristatus* grassland (*Anthoxanthum odoratum* sub-community)

Habitat number/description: MG6b - <i>Lolium perenne</i> - <i>Cynosurus cristatus</i> grassland (<i>Anthoxanthum odoratum</i> sub-community)					
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5
Grid reference	NS 51728 49527	NS 51735 49603	NS 51496 49577	NS 51528 49535	NS 51864 49810
<i>Anthoxanthum odoratum</i>	5	3	3	5	4
<i>Festuca rubra</i>	3	2	4	2	4
<i>Holcus lanatus</i>	5	5	5	4	5
<i>Nardus stricta</i>	-	-	4	-	-
<i>Rhynchospora squarrosus</i>	-	-	5	4	3
<i>Cerastium glomeratum</i>	2	-	-	-	2
<i>Cerastium fontanum</i>	3	4	5	4	3
<i>Poa trivialis</i>	4	4	4	5	4
<i>Poa annua</i>	2	3	3	2	2
<i>Ranunculus acris</i>	4	4	-	-	2
<i>Trifolium repens</i>	8	8	4	-	4
<i>Lolium perenne</i>	5	5	-	2	3
<i>Alopecurus pratensis</i>	3	3	-	-	-
<i>Ranunculus repens</i>	5	5	5	5	4
<i>Cirsium palustre</i>	1	-	-	-	-
<i>Agrostis capillaris</i>	4	4	4	4	3
<i>Juncus effusus</i>	-	4	-	-	-

Habitat number/description: MG6b - <i>Loilium perenne</i> - <i>Cynosurus cristatus</i> grassland (<i>Anthoxanthum odoratum</i> sub-community)					
<i>Achillea millefolium</i>	-	-	3	2	-
<i>Prunella vulgaris</i>	-	-	4	4	-
<i>Cynosurus cristatus</i>	-	-	8	9	4
<i>Bellis perennis</i>	-	-	-	5	-
<i>Cardamine</i> spp.	-	-	-	3	-

MG9 – *Holcus lanatus* – *Deschampsia cespitosa* grassland

Habitat number/description: MG9 - <i>Holcus lanatus</i> - <i>Deschampsia cespitosa</i> grassland			
Species	Quadrat 1	Quadrat 2	Quadrat 3
Grid reference	NS 51826 49846	NS 51812 49855	NS 51792 49899
<i>Deschampsia cespitosa</i>	5	6	5
<i>Anthoxanthum odoratum</i>	5	4	-
<i>Holcus lanatus</i>	5	7	7
<i>Nardus stricta</i>	5	6	5
<i>Rhynchospora squarrosa</i>	5	5	4
<i>Trifolium repens</i>	7	4	4
<i>Cirsium palustre</i>	-	-	2
<i>Agrostis capillaris</i>	5	5	6
<i>Juncus effusus</i>	5	-	-
<i>Cynosurus cristatus</i>	4	4	-
<i>Carex echinata</i>	5	-	-
<i>Carex ovalis</i>	3	5	5
<i>Luzula campestris</i>	-	2	2

U6 – *Juncus squarrosus* – *Festuca ovina* grassland

Habitat number/description: U6 - <i>Juncus squarrosus</i> - <i>Festuca ovina</i> grassland					
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5
Grid reference	NS 51705 49416	NS 51695 49417	NS 51652 49362	NS 51671 49338	NS 51857 49246
<i>Deschampsia flexuosa</i>	7	7	6	6	4
<i>Festuca ovina</i>	3	-	3	5	4
<i>Molinia caerulea</i>	4	3	2	3	2
<i>Anthoxanthum odoratum</i>	-	-	2	-	-
<i>Eriophorum vaginatum</i>	2	3	3	2	4
<i>Potentilla erecta</i>	6	6	4	5	5
<i>Vaccinium myrtillus</i>	7	7	4	5	1
<i>Polytrichum strictum</i>	5	5	-	4	3

Habitat number/description: U6 - <i>Juncus squarrosus</i> - <i>Festuca ovina</i> grassland					
<i>Pleurozium schreberi</i>	-	-	3	-	3
<i>Polytrichum commune</i>	-	-	-	3	-
<i>Galium saxatile</i>	2	-	3	-	-
<i>Luzula multiflora</i>	5	5	2	3	4
<i>Rhynchospora squarrosus</i>	5	4	-	-	-
<i>Nardus stricta</i>	3	4	3	4	-
<i>Juncus squarrosus</i>	8	7	5	6	6

U5b – *Nardus stricta* – *Galium saxatile* grassland

Habitat number/description: U5b - <i>Nardus stricta</i> - <i>Galium saxatile</i> grassland					
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5
Grid reference	NS 51841 48674	NS 52259 49871	NS 52220 49834	NS 52658 49249	NS 52569 49185
<i>Deschampsia flexuosa</i>	7	6	6	5	7
<i>Festuca ovina</i>	4	4	3	4	4
<i>Molinia caerulea</i>	3	-	2	-	2
<i>Anthoxanthum odoratum</i>	5	6	4	6	5
<i>Eriophorum vaginatum</i>	4	2	-	3	-
<i>Potentilla erecta</i>	4	2	4	2	3
<i>Vaccinium myrtillus</i>	5	4	5	4	4
<i>Pleurozium schreberi</i>	5	3	5	4	4
<i>Polytrichum commune</i>	5	3	5	4	5
<i>Galium saxatile</i>	3	3	3	3	3
<i>Luzula multiflora</i>	3	2	2	2	2
<i>Rhynchospora squarrosus</i>	-	3	2	-	2
<i>Nardus stricta</i>	8	7	8	8	8
<i>Juncus squarrosus</i>	3	-	3	-	2

M6 – *Carex echinata* – *Sphagnum fallax* mire

Habitat number/description: M6 - <i>Carex echinata</i> - <i>Sphagnum fallax</i> mire					
Species	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5
Grid reference	NS 51760 48703	NS 52051 49210	NS 52030 49324	NS 51604 49392	NS 52006 49545
<i>Deschampsia flexuosa</i>	5	4	5	4	2
<i>Deschampsia cespitosa</i>	-	-	-	-	-

Habitat number/description: M6 - <i>Carex echinata</i> - <i>Sphagnum fallax</i> mire					
<i>Molinia caerulea</i>	4	4	-	4	-
<i>Anthoxanthum odoratum</i>	-	-	5	-	-
<i>Eriophorum vaginatum</i>	-	-	-	7	-
<i>Holcus lanatus</i>	7	5	-	-	5
<i>Carex nigra</i>	-	-	-	8	-
<i>Juncus acutiflorus</i>	9	5	6	-	8
<i>Epilobium palustre</i>	5	2	-	-	3
<i>Sphagnum magellanicum</i>	4	-	-	-	-
<i>Cirsium palustre</i>	4	4	-	-	2
<i>Calliergonella cuspidata</i>	4	-	-	-	4
<i>Ranunculus repens</i>	3	5	-	-	-
<i>Luzula multiflora</i>	2	-	-	-	-
<i>Aulacomnium palustre</i>	4	-	-	-	-
<i>Galium saxatile</i>	2	3	3	-	2
<i>Carex pulicaris</i>	2	-	-	-	-
<i>Myosotis secunda</i>	2	-	-	-	-
<i>Sphagnum palustre</i>	4	5	5	-	3
<i>Holcus mollis</i>	-	-	-	-	3
<i>Juncus effusus</i>	-	4	5	4	2
<i>Sphagnum fallax</i>	-	7	7	8	6
<i>Polytrichum commune</i>	-	4	7	7	4
<i>Viola palustre</i>	-	5	-	-	2
<i>Rumex acetosa</i>	-	-	5	-	3
<i>Vaccinium myrtillus</i>	-	-	-	3	-
<i>Aulocomnium palustre</i>	-	-	-	5	-
<i>Potentilla erecta</i>	-	-	-	5	-
<i>Juncus squarrosus</i>	-	-	-	4	-

M4 – *Carex rostrata* – *Sphagnum fallax* mire

Habitat number/description: M4 - <i>Carex rostrata</i> - <i>Sphagnum fallax</i> mire			
	Quadrat 1	Quadrat 2	Quadrat 3
Species	NS 52034 49215	NS 52036 49193	NS 52035 49171
<i>Deschampsia flexuosa</i>	5	5	4
<i>Carex rostrata</i>	7	6	7
<i>Sphagnum fallax</i>	8	8	8
<i>Carex canescens</i>	3	-	2

Habitat number/description: M4 - <i>Carex rostrata</i> - <i>Sphagnum fallax</i> mire			
<i>Rumex acetosa</i>	5	5	5
<i>Polytrichum commune</i>	6	7	6
<i>Juncus effusus</i>	7	8	6
<i>Epilobium palustre</i>	2	2	2
<i>Sphagnum palustre</i>	4	2	4
<i>Dryopteris dilatata</i>	1	2	-
<i>Galium saxatile</i>	4	4	4

