APPENDIX 6-1

BOTANICAL STUDY

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1. INTRODUCTION

1.1 Introduction

MKO were commissioned to undertake detailed botanical surveys to provide an evaluation and assessments of the habitats occurring within and adjacent to the Proposed Project footprint. The detailed botanical surveys were undertaken on the 21st and 23rd of September 2022, 28th of September 2023 and 21st February 2024.

1.2 Survey Methods

A total of 18 relevés were undertaken within the Proposed Project footprint or representative habitats within the site. The location of each is provided on Figure 1-1.

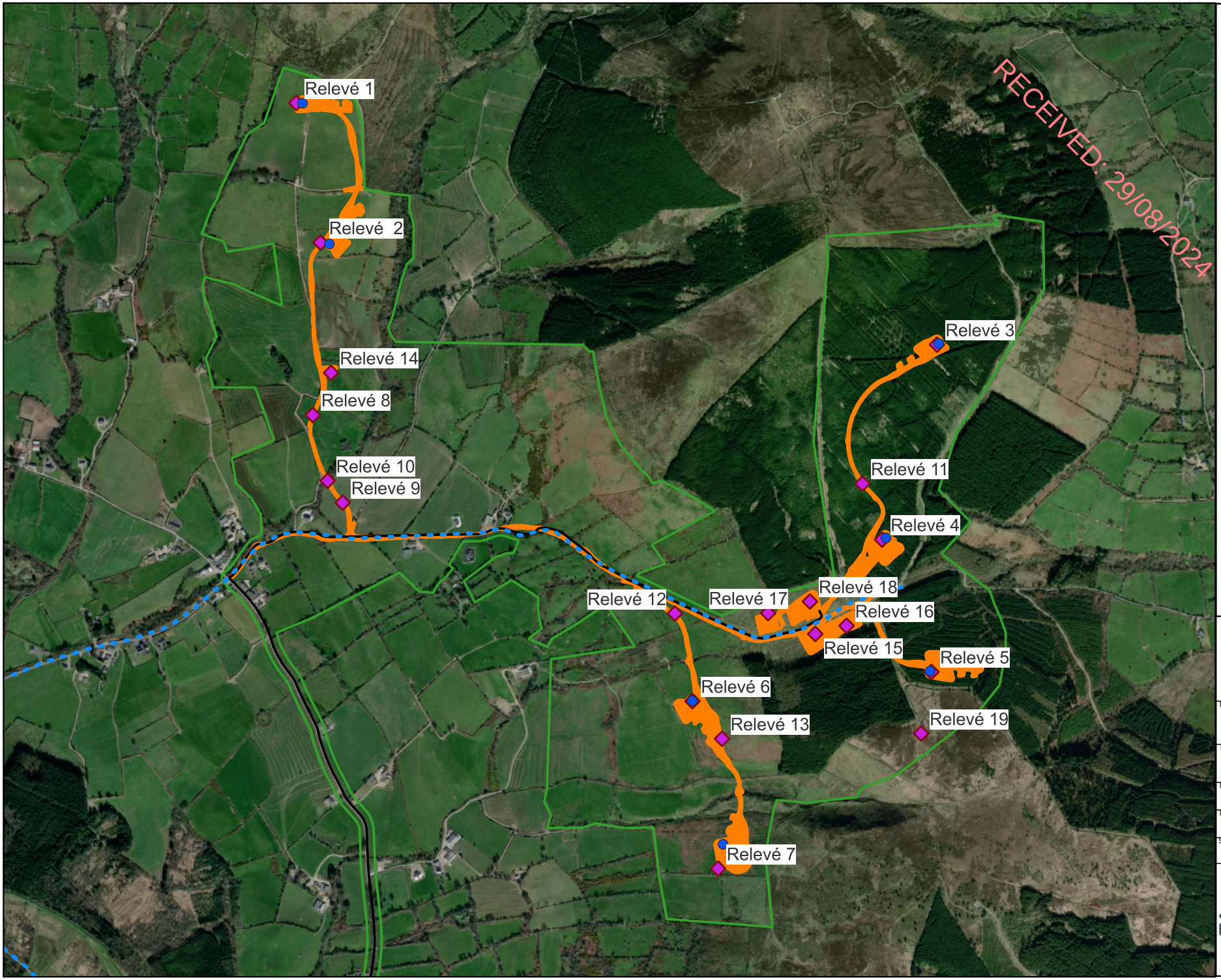
Relevés were undertaken in undertaken in line with the following guidance documents:

- Perrin, P.M., Barron, S.J., Roche, J.R. & O'Hanrahan, B. (2014). Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland. Version 2.0. Irish Wildlife Manuals, No. 79. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- O'Neill, F.H., Martin, J.R., Devaney, F.M. & Perrin, P.M. (2013), The Irish semi-natural grasslands survey 2007-2012. Irish Wildlife Manuals, No. 78. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Ireland.

All species were readily identifiable during the survey. Plant nomenclature for vascular plants follows '*New Flora of the British Isles*' (Stace, 2019), while mosses and liverworts nomenclature follows '*Mosses and Liverworts of Britain and Ireland - a field guide'* (British Bryological Society, 2010).

1.3 Statement of Authority

Field surveys were undertaken by Neansaí O'Donovan (B.Sc.), Rachel Walsh (B.Sc.), Timothy O'Ceallaigh (B.Sc.). Rachel is an experienced Ecologist with over 4 years' experience in habitat surveying and ecological assessment. Neansaí is an experienced Ecologist with over 3 years' experience in habitat surveying and ecological assessment. Timothy is a qualified ecologist with the relevant academic qualifications and competency in undertaking habitat and ecological assessments. This report has been written by Cuan Feely (B.Sc.) and Neansaí O'Donovan and reviewed by John Hynes (B.Sc., M.Sc., MCIEEM). John is a highly experienced ecologist has over 10 years' professional experience in environmental management and ecological assessment.



Map Legend

- Proposed Site Boundary
- Proposed Wind Farm Footprint
- Proposed Turbines
- Proposed Grid Connection Route
- Proposed Turbine Delivery Route
- Relevé Locations

Drawing Title

Relevé Locations

Project Title

Lackareagh Wind Farm

Drawn By	Checked By
NOD	RW
Project No.	Drawing No.
220245	Figure 1.1
Scale	Date
1:14,000	12.08.2024

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2. RESULTS

2.1 Proposed Wind Farm Infrastructure

2.1.1 Turbine 1

Turbine 1 is proposed to be located on Improved agricultural grassland (GA1). The sward is species poor and dominated by Perennial Ryegrass (*Lolium perenne)* with Creeping Bent (*Agrostis stolonifera).*

Table 2-1 Relevé results in the footprint of proposed turbine 1

Relevé 1	Grid reference: ITM 562189 673989	Date: 28/09/2023
Species	Common Name	% Cover
Vascular Plants		
Lolium perenne	Perennial Ryegrass	60
Agrostis stolonifera	Creeping Bent	20
Cynosurus cristatus	Crested Dogs Tail	5
Holcus lanatus	Yorkshire Fog	<10
Trifolium repens	White Clover	<5
Ranunculus repens	Creeping Buttercup	<5
Cerastium fontanum	Mouse-ear Chickweed	<5
Rumex acetosa	Common sorrel	<5
Bryophytes		
Brachythecium rutabulum	Rough-stalked Feather-moss	<1
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C *Holcus lanatus - Lolium perenne*

Plate 2-1 Improved agricultural grassland (GA1) in the footprint of the location for proposed turbine 1, in the north-west section of the Proposed Wind Farm site.

2.1.2 Turbine 2

Turbine 2 is proposed to be located on Improved agricultural grassland (GA1) which contains a mix of grasses such as Perennial Ryegrass (*Lolium perenne)*, Creeping Bent (*Agrostis stolonifera)*, Crested Dogs' Tail (*Cynosurus cristatus)*, Yorkshire Fog (*Holcus lanatus)* and Smooth Meadow Grass (*Poa pratensis)*.

Table 2-2 Relevé results in the footprint of proposed turbine 2

Relevé 2	Grid reference: ITM 562258 673592	Date: 28/09/2023
Species	**Common Name**	**% Cover**
Vascular Plants		
Lolium perenne	Perennial Ryegrass	30
Agrostis stolonifera	Creeping Bent	35
Cynosurus cristatus	Crested Dogs Tail	10
Holcus lanatus	Yorkshire Fog	10
Poa pratensis	Smooth Meadow Grass	10
Taraxacum officinale agg.	Dandelion	<5
Achillea millefolium	Yarrow	<5
Trifolium repens	White Clover	<5
Ranunculus repens	Creeping Buttercup	<5

Rumex acetosa	Common Sorrel	<5
Cerastium fontanum	Mouse-ear Chickweed	<1
Plantago major	Greater plantain	<1
Plantago lanceolata	Ribwort Plantain	<1
Cardamine pratensis	Cuckoos Flower	<1
Bellis perennis	Common daisy	<1
Hypochaeris radicata	Catsear	<1
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C *Holcus lanatus - Lolium perenne*

Plate 2-2 Improved agricultural grassland (GA1) in the footprint of the location for proposed turbine 2, in the north-west section of the Proposed Wind Farm site.

2.1.3 Turbine 3

Turbine 3 is proposed to be located in a Conifer plantation (WD4) which is dominated by Sitka Spruce (*Picea sitchensis).*

Table 2-3 Relevé results of in the footprint of proposed turbine 3

Relevé 3	Grid reference: ITM 564010 673302	Date: 21/02/2024

Species	Common Name	% Cover
Vascular Plants		
Picea sitchensis	Sitka Spruce	85
Blechnum spicant	Hard Fern	<5
Bryophytes		
Thuidium tamariscinum	Common Tamarisk-moss	30
Rhytidiadelphus loreus	Little Shaggy Moss	10
Fossitt (2000) Habitat Classification		Conifer plantation (WD4)
IVC community		None

Plate 2-3 Conifer plantation (WD4) in the footprint of the location for proposed turbine 3, in the north-east section of the Proposed Wind Farm site.

2.1.4 Turbine 4

Turbine 4 is proposed to be located in a Conifer plantation (WD4) which is dominated by Sitka Spruce (*Picea sitchensis).*

Table 2-4 Relevé results in the footprint of proposed turbine 4

Relevé 4	**Grid reference: ITM 563854 672748**	**Date: 21/02/2024**
Species	**Common Name**	**% Cover**
Vascular Plants		
Picea sitchensis	Sitka Spruce	80
Larix kaempferi	Japanese larch	20
Bryophytes		
Thuidium tamariscinum	Common Tamarisk-moss	90
Cladonia portentosa	Reindeer lichen	35
Fossitt (2000) Habitat Classification		Conifer plantation (WD4)
IVC community		None

Plate 2-4 Conifer plantation (WD4) in the footprint of the location for proposed turbine 4, in the north-east section of the Proposed Wind Farm site.

2.1.5 Turbine 5

Turbine 5 is proposed to be located in a Conifer plantation (WD4) which is dominated by Sitka Spruce (*Picea sitchensis).*

Table 2-5 Relevé results in the footprint of proposed turbine 5

Relevé 5	Grid reference: ITM 563994 672372	Date: 21/02/2024
Species	Common Name	% Cover
Vascular Plants		
Picea sitchensis	Sitka Spruce	90
Rubus fruticosus agg	Bramble	5
Molinia caerulea	Purple moor grass	5
Calluna vulgaris	Ling heather	10
Bryophytes		
Polytrichum commune	Common Hairycap Moss	55
Rhytidiadelphus loreus	Little shaggy moss	25
Sphagnum capillifolium	Red Bog-moss	5
Sphagnum papillosum	Papillose Bog-moss	5
Thuidium tamariscinum	Common Tamarisk-moss	25
Fossitt (2000) Habitat Classification		Conifer plantation (WD4)
IVC community		*Calluna vulgaris–Molinia caerulea– Erica cinerea* heath (transitional)

Plate 2-5 Conifer plantation (WD4) in the footprint of the location for proposed turbine 5, in the north-east section of the Proposed Wind Farm site.

2.1.6 Turbine 6

Turbine 6 is proposed to be located on Improved Agricultural Grassland (GA1) which is dominated by Perennial Ryegrass (*Lolium perenne)* along with smaller quantities of Yorkshire Fog (*Holcus lanatus)* and Purple Moor Grass (*Molinia caerulea)*.

Table 2-6 Relevé results in the footprint of proposed turbine 6

Relevé 6	Grid reference: ITM 563315 672289	Date: 28/09/2023
Species	**Common Name**	**% Cover**
Vascular Plants		
Lolium perenne	Perennial Ryegrass	80
Ranunculus repens	Creeping Buttercup	<5
Ranunculus acris	Meadow Buttercup	1
Senecio jacobaea	Common Ragwort	1
Euphrasia spp.	Eyebright	1
Trifolium repens	White Clover	<5
Rumex obtusifolius	Broad-leaved Dock	1

Molinia caerulea	Purple moor grass	20
Juncus effusus	Soft Rush	10
Plantago lanceolata	Ribwort Plantain	<5
Taraxacum vulgaria	Dandelion	15
Achillea millefolium	Yarrow	10
Holcus lanatus	Yorkshire Fog	20
Stellaria media	Common Chickweed	1
Bare ground		<5
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C *Holcus lanatus - Lolium perenne* (transitional)

Plate 2-6 Improved agricultural grassland (GA1) in the footprint of the location for proposed turbine 6, in the south-east section of the Proposed Wind Farm site.

2.1.7 Turbine 7

Turbine 7 is proposed to be located on Improved agricultural grassland (GA1) which is dominated by Perennial Ryegrass (*Lolium perenne).*

Table 2-7 Relevé results in the footprint of proposed turbine 7

Relevé 7	Grid reference: ITM 563388 671813	Date: 28/09/2023
Species	Common Name	% Cover
Vascular Plants		
Lolium perenne	Perennial Ryegrass	85
Ranunculus repens	Creeping Buttercup	1
Senecio jacobaea	Common Ragwort	1
Trifolium repens	White Clover	5
Pteridium aquilinum	Bracken	10
Achillea millefolium	Yarrow	<5
Holcus lanatus	Yorkshire Fog	1
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C *Holcus lanatus - Lolium perenne* (transitional)

Plate 2-7 Improved agricultural grassland (GA1) in the footprint of the location for proposed turbine 7, in the south-east section of the Proposed Wind Farm site.

2.1.8 Proposed New Road 1 (Internal access track to Met mast, T1 and T2)

Approximately 900m of the proposed 3.9km of proposed new road is located in an area of Improved agricultural grassland (GA1), which is dominated by Perennial Ryegrass (*Lolium perenne*). Varied grass species such as Creeping Bent (*Agrostis stolonifera*) and Yorkshire Fog (*Holcus lanatus*) are also common.

Table 2-8 Relevé results in the footprint of proposed new road 1

Relevé 8	Grid reference: ITM 562236 673102	Date: 28/09/2023
Species	**Common Name**	**% Cover**
Vascular Plants		
Lolium perenne	Perennial Ryegrass	60
Agrostis stolonifera	Creeping Bent	15
Holcus lanatus	Yorkshire Fog	15
Trifolium repens	White Clover	<5
Ranunculus repens	Creeping Buttercup	<5
Rumex acetosa	Common Sorrel	<5

Relevé 8	Grid reference: ITM 562236 673102	Date: 28/09/2023
Stellaria media	Common Chickweed	<1
Cirsium arvense	Creeping Thistle	<5
Cerastium fontanum	Mouse-ear Chickweed	<5
Rumex obtusifolius	Broad-leaved Dock	<5
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C *Holcus lanatus - Lolium perenne*

Plate 2-8 Improved agricultural grassland (GA1) in the footprint of a proposed new road located within the Proposed Wind Farm site.

2.1.9 Proposed New Road 2 (Internal access track from Turbines to L7080)

Approximately 195m of the 3.9km of proposed new road is located on an area of Improved agricultural grassland (GA1), which is dominated by Perennial Ryegrass (*Lolium perenne*).

Table 2-9 Relevé results in the footprint of proposed new road 2

Relevé 9	Grid reference: ITM 562321 672853	Date: 28/09/2023
Species	Common Name	% Cover
Vascular Plants		

Relevé 9	Grid reference: ITM 562321 672853	Date: 28/09/2023
Lolium perenne	Perennial Ryegrass	85
Rumex obtusifolius	Common Sorrel	<5
Taraxacum officinale agg	Dandelion	<5
Stellaria media	Common Chickweed	<1
Cardamine pratensis	Cuckoos Flower	<1
Cerastium fontanum	Mouse-ear Chickweed	<5
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		WE1E *Poa annua – Plantago major* (transitional)

Plate 2-9 Improved agricultural grassland (GA1) in the footprint of a proposed new road located within the Proposed Wind Farm site.

2.1.10 Proposed New Road 3 (Internal access track from Turbines to L7080)

Approximately 195m of the 3.9km of proposed new road is located in an area of Mixed broadleaved woodland (WD1), where Sycamore (*Acer pseudoplatanus)* is the dominant tree species. Hazel (*Corylus avellana*), Bramble (*Rubus fruticosus agg.*) and Nettle (*Urtica dioica*) are the most common understory flora.

Table 2-10 Relevé results in the footprint of proposed new road 3

Relevé 10	Grid reference: ITM 562278 672915	Date: 28/09/2023
Species	Common Name	% Cover
Vascular Plants		
Corylus avellana	Hazel	10
Acer pseudoplatanus	Sycamore	60
Prunus spinosa	Blackthorn	5
Rubus fruticosus agg.	Bramble	10
Urtica dioica	Nettle	10
Angelica sylvestris	Wild Angelica	5
Hedera helix	Ivy	5
Lonicera periclymenum	Honeysuckle	<5
Holcus mollis	Creeping Soft Grass	<5
Oxalis acetosella	Wood Sorrel	<1
Geranium robertianum	Herb Robert	<5
Chrysosplenium oppositifolium	Opposite Leaved Golden Saxifrage	<1
Glechoma hederacea	Ground Ivy	<1
Pteridium aquilinum	Bracken	10
Dryopteris dilatata	Broad Buckler Fern	<5
Dryopteris affinis	Scaley Male Fern	<5
Polystichum setiferum	Soft Shield Fern	<5
Asplenium scolopendrium	Hearts Tongue Fern	<5
Bryophytes		
Kindbergia praelonga	Common Feather-moss	<10
Brachythecium rutabulum	Rough-stalked Feather-moss	<5
Plagiomnium undulatum	Hart's-tongue Thyme-moss	<5
Polytrichastrum formosum	Bank Haircap	<5

Relevé 10	Grid reference: ITM 562278 672915	Date: 28/09/2023
Hypnum cupressiforme	Cypress-leaved Plait-moss	<5
Hookeria lucens	Shining Hookeria	<1
Fossitt (2000) Habitat Classification		Broad Leaved Woodland (WD1)
IVC community		WL3D *Salix cinerea - Urtica dioica* (transitional)

Plate 2-10 Mixed broadleaved woodland (WD1) in the footprint of a proposed new road located within the Proposed Wind Farm site.

2.1.11 Proposed New Road 4 (Internal access track between T3 and T4)

Approximately 1,160m of the 3.9km of proposed new road is mainly located in an area dominated by Conifer Planation (WD4). There are small areas of firebreaks within the conifer plantation where wetter habitats associated with Wet Heath (HH3) / Upland Blanket Bog (PB2) occur. The vegetation within the firebreaks is dominated by Purple Moor Grass (*Molinia caerulea),* Soft Rush (*Juncus effusus*) and bryophytes.

Table 2-11 Relevé results in the footprint of proposed new road 4

Relevé 11	Grid reference: ITM 563798 672907	Date: 21/02/2024
Species	Common Name	% Cover
Vascular Plants		

Juncus effusus	Soft Rush	20
Molinia caerulea	Purple Moor Grass	90
Calluna vulgaris	Ling Heather	5
Potentilla erecta	Tormentil	1
Pedicularis sylvatica	Lousewort	5
Bryophytes		
Thuidium tamariscinum	Common Tamarisk-moss	10
Sphagnum capillifolium	Red Bog-moss	20
Sphagnum papillosum	Papillose Bog-moss	20
Polytrichum commune	Common Hairycap Moss	10
Fossitt (2000) Habitat Classification		Wet Heath (HH3) / Upland Blanket Bog (PB2)
IVC community		HE4E *Molinia caerulea* - *Calluna vulgaris* -. *Erica textralix* (transitional)

Plate 2-11 Wet Heath (HH3) mosaic Upland Blanket Bog (PB2) in the footprint of a proposed new road located within the Proposed Wind Farm site.

2.1.12 Proposed New Road 5 (Internal access track to T6)

Approximately 400m of the 3.9km of proposed new road is located in an area of Improved agricultural grassland (GA1) mosaic of Wet grassland (GS4), which is dominated by Perennial Ryegrass (*Lolium perenne*) and Purple Moor Grass (*Molinia caerulea*). Hedgerows (WL1) containing species such as Hawthorn (*Crataegus monogyna*), Bracken (*Pteridium aquilinum*), Gorse (*Ulex europaeus*) and Bramble (*Rubus fruticosus*) can be found bordering the proposed road.

Table 2-12 Relevé results in the footprint of proposed new road 5

Relevé 12	Grid reference: ITM 563265 672538	Date: 28/09/2023
Species	Common Name	% Cover
Vascular Plants		
Lolium perenne	Perennial Ryegrass	80
Molinia caerulea	Purple moor grass	20
Holcus lanatus	Yorkshire Fog	10
Juncus effusus	Soft Rush	10
Senecio jacobaea	Common Ragwort	5
Ranunculus repens	Creeping Buttercup	15

Ranunculus acris	Meadow Buttercup	<5
Trifolium repens	White Clover	<5
Rumex obtusifolius	Broad-leaved Dock	<5
Plantago lanceolata	Ribwort Plantain	<1
Euphrasia spp.	Eyebright spp.	5
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C *Holcus lanatus - Lolium perenne*

Plate 2-12 Improved agricultural grassland (GA1) mosaic of Wet grassland (GS4) in the footprint of a proposed new road located within the Proposed Wind Farm site.

2.1.13 Proposed New Road 6 (Internal access track to T7)

Approximately 505m of the 3.9km of proposed new road is located in an area of Dense Bracken (HD1) which is dominated by Bracken (*Pteridium aquilinum*) and Bramble (*Rubus fruticosus agg*).

Table 2-13 Relevé results in the footprint of proposed new road 6

Relevé 13	**Grid reference: ITM 563399 672182**	**Date: 28/09/2023**
Species	**Common Name**	**% Cover**
Vascular Plants		
Pteridium aquilinum	Bracken	70
Rubus fruticosus agg	Bramble	30
Lolium perenne	Perennial ryegrass	20
Galium aparine	Cleavers	1
Holcus lanatus	Yorkshire fog	1
Fossitt (2000) Habitat Classification		Dense Bracken (HD1)
IVC community		SC1E *Rubus fruticosus agg.* - *Holcus lanatus* (transitional)

Plate 2-13 Dense bracken (HD1) in the footprint of a proposed new road located within the Proposed Wind Farm site.

2.1.14 Proposed Met Mast

The proposed met mast is located in Improved agricultural grassland (GA1) with Perennial Ryegrass (*Lolium perenne*), Creeping Bent (*Agrostic stoloifera*) and Yorkshire Fog (*Holcus lanatus)* being the dominant grass species.

Table 2-14 Relevé results in the footprint of the proposed met mast

Relevé 14	Grid reference: ITM 562288 673222	Date: 28/09/2023
Species	Common Name	% Cover
Vascular Plants		
Lolium perenne	Perennial Ryegrass	45
Agrostis stolonifera	Creeping Bent	30
Holcus lanatus	Yorkshire Fog	10
Juncus effusus	Soft Rush	5
Dactylis glomerata	Cocks foot	5
Poa pratensis	Smooth Meadow Grass	<5
Rumex obtusifolius	Broad Leaved Dock	5
Trifolium repens	White Clover	<5
Ranunculus repens	Creeping Buttercup	<5
Rumex acetosa	Common Sorrel	<5
Stellaria media	Common Chickweed	<5
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C *Holcus lanatus - Lolium perenne*

Plate 2-14 Improved agricultural grassland (GA1) in the footprint of a proposed met mast within the Proposed Wind Farm site.

2.1.15 Proposed Temporary Construction Compound

The proposed temporary construction compound is situated in an area of Recently Felled Woodland (WS5) which is also the case for the proposed borrow pit, substation and storage area. These areas are managed for commercial purposes, forestry in these areas is felled and then replanted. Whilst forestry is maturing, other pioneer habitats occur throughout, between the saplings such as scrub. These areas comprised Heathers, Rushes, Grasses and Bryophytes, other species associated are Heath bedstraw (*Galium saxatile*) and Tormentil (*Potentilla erecta).*

Table 2-15 Relevé results in the footprint of the proposed temporary construction compound

Relevé 15	Grid reference: ITM 563664 672480	Date: 28/09/2023
Species	Common Name	% Cover
Vascular Plants		
Ulex europaeus	Gorse	<5
Salix cinnerea	Willow	<5
Picea sitchensis	Sitka Spruce	10
Calluna vulgaris	Ling Heather	20
Erica cinerea	Bell Heather	15
Agrostis capillaris	Common Bent	20
Holcus lanatus	Yorkshire Fog	25
Festuca ovina	Sheeps Fescue	15

Rubus fruticosus agg.	Bramble	10
Potentilla erecta	Tormentil	<5
Galium saxatile	Heath Bedstraw	<1
Juncus effusus	Soft Rush	<5
Bryophytes		
Thuidium tamariscinum	Common Tamarisk-moss	10
Rhytidiadelphus squarrosus	Springy turf-moss	5
Hylocomium splendens	Glittering Wood-moss	<10
Pseudoscleropodium purum	Neat Feather-moss	<5
Pleurozium schreberi	Red-stemmed Feather-moss	<5
Polytrichum commune	Common Haircap	5
Fossitt (2000) Habitat Classification		Recently Felled Woodland (WS5)
IVC community		GL4B *Nardus stricta - Potentilla erecta*

Plate 2-15 Recently Felled Woodland (WS5) in the footprint of a proposed temporary construction compound within the Proposed Wind Farm site.

2.1.16 Proposed Storage Area

The proposed storage area is located in an area of Recently felled woodland (WS5) with many Sitka Spruce (*Picea sitchensis)* saplings growing through grasses such as Common Bent (*Agrostis capillaris)*, Yorkshire Fog (*Holcus lanatus)* and Sheeps fescue *(Festuca ovina).*

Table 2-16 Relevé results in the footprint of the proposed storage area

Relevé 16	Grid reference: ITM 563753 672503	Date: 28/09/2023
Species	**Common Name**	**% Cover**
Vascular Plants		
Salix cinnerea	Willow	5
Picea sitchensis	Sitka Spuce	5
Calluna vulgaris	Ling Heather	20
Vaccinium myrtillus	Bilberry	10
Agrostis capillaris	Common Bent	20
Holcus lanatus	Yorkshire Fog	15
Festuca ovina	Sheeps Fescue	10
Juncus effusus	Soft Rush	5
Rubus fruticosus agg.	Bramble	5
Chamaenerion angustifolium	Rosebay Willow Herb	<5
Digitalis purpurea	Foxglove	<1
Potentilla erecta	Tormentil	<5
Galium saxatile	Heath Bedstraw	<1
Stellaria holostea	Greater Stitchwort	<5
Geranium robertianum	Herb Robert	<5
Dryopteris dilatata	Broad Buckler Fern	<5
Bryophytes		
Thudium sp.	n/a	10
Polytrichum commune	Common Haircap	10
Hypnum sp.	n/a	10

Kindbergia praelonga	Common Feather-moss	5
Fossitt (2000) Habitat Classification		Recently Felled Woodland (WS5)
IVC community		HE2C *Calluna vulgaris* - *Agrostis capillaris* (transitional)

Plate 2-16 Recently Felled Woodland (WS5) in the footprint of a proposed storage area within the Proposed Wind Farm site.

2.1.17 Proposed Borrow Pit

The proposed borrow pit is located in an area of Recently felled woodland (WS5) with many Sitka Spruce (*Picea sitchensis)* saplings growing through the Gorse (*Ulex europaeus)*, Ling Heather (*Calluna vulgaris)* and Bell Heather (*Erica cinerea)*.

Table 2-17 Relevé results in the footprint of the proposed borrow pit

Relevé 17	Grid reference: ITM 563530 672539	Date: 28/09/2023
Species	**Common Name**	**% Cover**
Vascular Plants		
Calluna vulgaris	Ling Heather	25
Erica cinerea	Bell Heather	10
Rubus fruticosus agg	Bramble	5
Juncus conglomeratus	Compact Rush	5
Picea sitchensis	Sitka Spruce	20
Pteridium aquilinum	Bracken	1
Potentilla erecta	Tormentil	<5
Ulex europaeus	Gorse	85
Molinia caerulea	Purple moor grass	15
Bryophytes		
Polytrichum commune	Common Hairycap Moss	<5
Fossitt (2000) Habitat Classification		Recently Felled Woodland (WS5)
IVC community		SC1D *Ulex europaeus - Rubus fruticosus agg* (transitional)

Plate 2-17 Recently Felled Woodland (WS5) in the footprint of a proposed borrow pit within the Proposed Wind Farm site.

2.2 Proposed Grid Connection

2.2.1 Proposed Onsite 38kV Substation and BESS Compound

The Proposed Onsite 38kV Substation and BESS Compound is located within a Recently felled woodland (WS5) which has been predominantly recolonised by Ling Heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*) and Bramble (*Rubus fruticosus agg.*).

Table 2-18 Relevé within the footprint of proposed Onsite 38kV Substation

Relevé 18	Grid reference: ITM 563649 672572	Date: 28/09/2023
Species	Common Name	% Cover
Vascular Plants		
Calluna vulgaris	Ling Heather	60
Erica cinerea	Bell Heather	20
Rubus fruticosus agg	Bramble	15
Salix cinnerea	Willow	<5
Picea sitchensis	Sitka Spruce	<5

Pteridium aquilinum	Bracken	1
Potentilla erecta	Tormentil	<5
Molinia caerulea	Purple moor grass	15
Bryophytes		
Polytrichum commune	Common Hairycap Moss	10
Fossitt (2000) Habitat Classification		Recently Felled Woodland (WS5)
IVC community		HE2E *Calluna vulgaris – Trichophorum cespitosum/germanicum* heath

Plate 2-18 Recently Felled Woodland (WS5) in the footprint of a proposed onsite 38kV substation and BESS compound within the Proposed Wind Farm site.

2.2.2 Proposed Grid Connection Route

The Proposed Grid Connection Route will be located within the existing road, therefore botanical relevés along the cabling route were not required. A description of the cable route and habitats present in the wider area adjacent to the road is found in Chapter 6 of the EIAR.

2.3 Habitats Outside the Proposed Project Footprint

2.3.1 Wet heath (HH3) and Upland Blanket Bog (PB2)

Areas of Wet heath (HH3) with mosaics of Upland blanket bog (PB2) are situated in the south-east and north-east of the Proposed Wind Farm site, north of T3 and south of T5 (please see Plate 6-8 in Chapter 8 of the EIAR). These habitats have links with Annex I habitats. Wet heath corresponds to the annexed habitat, *'northern Atlantic wet heaths with Erica tetralix (4010)'*. While blanket bogs correspond to the annexed habitats, that are still capable of peat formation correspond to the priority habitat, '*blanket bogs (*if active bog) (7130)*' and *'depressions on peat substrates of the Rhynchosporion (7150)*' occurs in pockets as a sub-habitat of blanket bog. However, no works are proposed to take place in these areas.

Small areas of these mosaic habitats also occur along firebreaks within conifer plantation forestry within the vicinity of T3 and T4. However, these areas are fragmented and small.

Table 2-19 below contains the results of relevé taken on Wet heath (HH3) with mosaics of Upland blanket bog (PB2) areas in the south-east of the Proposed Wind Farm site.

Table 2-19 Relevé of habitat outside the works area

Relevé 1	Grid reference: ITM 563965 672197	Date: 21/09/2022
Species	Common Name	% Cover
Vascular Plants		
Calluna vulgaris	Ling Heather	70
Erica cinerea	Bell Heather	10
Erica tetralix	Cross leaved heather	15
Trichophorum germanicum	Deer grass	30
Empetrum nigrum	Crowberry	10
Molinia caerulea	Purple moor grass	5
Juncus conglomeratus	Compact Rush	10
Potentilla erecta	Tormentil	10
Eriophorum vaginatum	Hare's-tail Cottongrass	1
Non-Vascular Plants		
Rhytidiadelphus loreus	Little Shaggy Moss	5
Sphagnum fallax	Flat-topped Bog-moss	20
Sphagnum capillifolium	Acute-leaved Bog-moss	30

Polytrichum commune	Common Hairycap Moss	30
Fossitt (2000) Habitat Classification		Wet heath (HH3) with mosaics of Upland blanket bog (PB2)
IVC classification		HE4A *Molinia caerulea – Trichophorum cespitosum/germanicum* peatland (transitional) Annex I Habitat affinity: 4010 Wet heath or habitat 7130 Blanket bog (active)*

Plate 2-19 Habitat mosaic of Wet heath (HH3) and Upland blanket bog (PB2) south-east of the Proposed Wind Farm Site.

3. CONCLUSION

As demonstrated by the relevés recorded and presented in Sections 2.1 to 2.2, habitats within the footprint of the Proposed Project mainly consist of species poor Improved agricultural grassland (GA1), Conifer plantation (WD4), Dense Bracken (HD1) and Recently Felled Woodland (WS5) of limited conservation value and to a lesser extent Mixed broadleaved woodland (WD1), Wet grassland (GS4) and Wet Heath (HH3) / Upland Blanket Bog (PB2) which either occur as small and fragmented or mosaics with species poor habitats such as Improved agricultural grassland (GA1) and Conifer plantation (WD4). The following habitats which have relations to Annex I habitats are present within the Proposed Wind Farm site:

- Wet heath (HH3) mosaic Upland blanket bog (PB2)

However, the large extents of these habitats as shown in Figure 6.4 in Chapter 6 of the EIAR are outside of the Proposed Project footprint and therefore are completely avoided.