APPENDIX 6-3

DETAILED BOTANICAL SURVEY REPORT

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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 on site at the proposed Lemanaghan Windfarm. The detailed assessments focused on the habitats occurring within the footprint of the Proposed Project.

As detailed in Section 1.1.1 in Chapter 1, for the purposes of this EIAR, the various project components are described and assessed using the following references: 'Proposed Project', 'Proposed Wind Farm', 'Proposed Grid Connection' and the 'Proposed Project site' or 'site'.

1.2 Survey Methods

A total of 27 relevés undertaken within the footprint of the Proposed Development are detailed in this report. The location of each is provided on Figure 1.1. The detailed botanical assessments were undertaken on the following dates:

- 29th June 2023
- 25th July 2023
- 17th July 2024
- 18th July 2024
- 19th August 2024
- 29th August 2024
- 10th September 2024
- 3rd October 2024
- 9th October 2024
- 29th July 2025

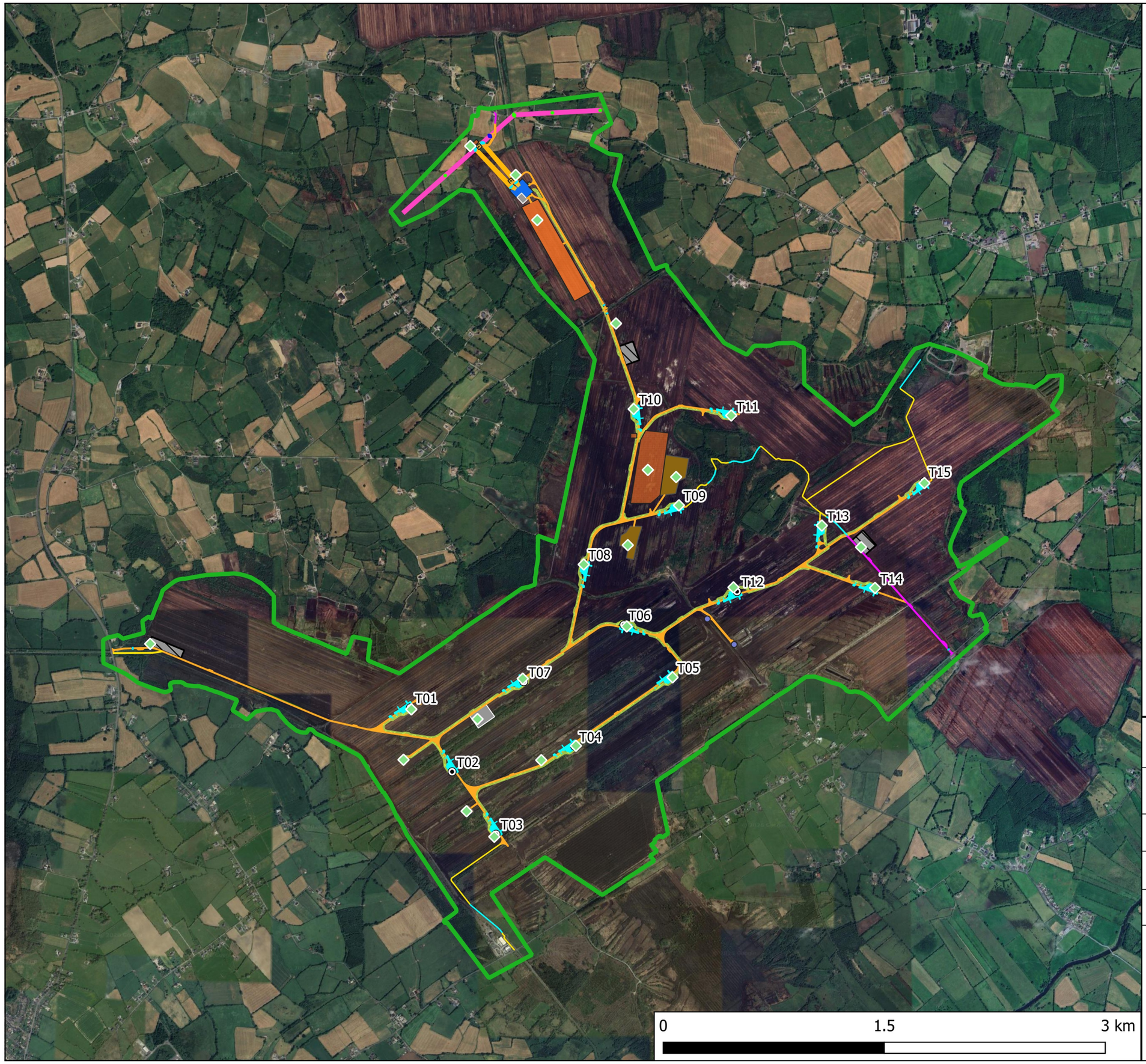
Relevés that were undertaken in peatland habitats followed guidelines set out in the following document:

Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

All species were readily identifiable during the survey. Plant nomenclature for vascular plants follows '*New Flora of the British Isles*' (Stace, 2010), 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 Patrick Ellison (B.Sc., M.Sc.), Neansaí O' Donovan (B.Sc. Wildlife Biology), Cuan Feely (B.Sc.), David Mesarcik (B.Sc.), Valerie Kendall (B.Sc., M.Sc.), Rachel Walsh (B.Sc., MCIEEM) and Fred Moseley (B.Sc.) of MKO. This report has been reviewed by Rachel Walsh (BSc., MCIEEM) who has over 5 years' experience in ecological assessment and botanical surveying.



Map Legend

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- Lapwing Semi-Grassland Mosaic
- Relevé Locations

N

Drawing Title

Relevé Locations

Project Title

Lemanaghan Wind Farm, Co. Offaly

Drawn By	Checked By
SS	RW
Project No. 200804	Drawing No. Figure 1
Scale 1:25,000	Date 2026-03-12

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2. RESULTS

The majority of infrastructure for the Proposed Project occurs on cutover bog (PB4)[1]. All relevés undertaken have been assigned to the bare peat cutover bog communities as per Smith et al. (2020). Small areas of immature woodland (WS2) and scrub (WS1) are also within the footprint. The Proposed Grid Connection is located on improved agricultural grassland (GA1).

2.1 Turbine T01

Turbine T01 will be located on recolonising cutover bog (PB4) habitat.

Table 2-1 Relevé within the footprint of Turbine T01

Relevé 1	Grid reference: ITM 614205 727363	Date 03/10/2024
Species	Common Name	% Cover
Vascular Plants		
Eriophorum angustifolium	Common cottongrass	40
Juncus bufonius	Toad rush	10
Additional relevé data as per Smith at al. 2020[2]		
Sphagnum cover (%)		0
Bare peat cover (%)		60
Average acrotelm depth (cm) (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

[1] *Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Dublin: The Heritage Council.*

[2] *Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.*

Plate 2-1 Habitat in the footprint of Turbine T01

2.2 Turbine T02

Turbine T02 is located on cutover bog (PB4).

Table 2-2 Relevé within the footprint of Turbine T02

Relevé 1	Grid reference: ITM 614205 727363	Date 09/10/2024
Species	**Common Name**	**% Cover**
Vascular Plants		
Tussilago farfara	Colts foot	30
Epilobium sp.	Willow herb	1
Juncus effusus	Soft rush	20
Equisetum sp.	Horsetail	5
Persicaria maculosa	Redshank	1
Betula pubescens	Downy birch	1
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		45
Average acrotelm depth (cm)		No acrotelm

Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-2 Habitat in the footprint of Turbine T02

2.3 Turbine T03

Turbine T03 is located on cutover bog (PB4).

Table 2-3 Botanical Survey Results – Relevé 1 in the vicinity of Turbine T03

Relevé 1	Grid reference: ITM 614768 726499	Date 03/10/2024
Species	Common Name	% Cover
Vascular Plants		
Juncus bufonius	Toad rush	1
Betula pubescens	Downy birch	1
Additional relevé data as per Smith at al. 2020[3]		
Sphagnum cover		0
Bare peat cover		98

[3] *Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.*

Average acrotelm depth (cm)	No acrotelm
Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-3 Habitat in the footprint of Turbine T03

2.4 Turbine T04

Turbine T04 is located on an area of recolonising cutover bog comprising a mosaic of dry grassland (GS2), heath (HH1) and scrub (WS1) habitats.

Table 2-4 Relevé within the footprint of Turbine T04

Relevé 1	Grid reference: ITM 615322 727116	Date 19/08/2024
Species	Common Name	% Cover
Vascular Plants		
Calluna vulgaris	Ling heather	40
Daucus carota	Wild carrot	20
Betula pubescens	Downy birch saplings	20
Leontodon hispidus	Rough hawkbit	20
Agrostis capillaris	Common bent	10

Cirsium palustre	Marsh thistle	10
Juncus effusus	Soft rush	10
Centaurium erythraea	Common centaury	5
Rumex obtusifolius	Broadleaved dock	5
Tussilago farfara	Colts foot	5
Hypericum sp.		2
Equisetum sp.	Horsetail	2
Polytrichum commune	Common haircap moss	30
Campylopus introflexus		30

Plate 2-4 Habitat at Turbine 4

2.5 Turbine T05

Turbine T05 is located on cutover bog (PB4).

Table 2-5 Relevé within the footprint of Turbine T05

Relevé 1	Grid reference: ITM 615978 727580	Date 19/08/2024
Species	Common Name	% Cover
Vascular Plants		
Eriophorum angustifolium	Common cottongrass	25
Leontodon hispidus	Rough hawkbit	5
Betula pubescens	Downy birch sapling	2
Equisetum arvense	Field horsetail	10
Sagina nodosa	Knotted pearlwort	0.5
Anthoxanthum odoratum	Sweet vernal grass	0.5
Angelica sylvestris	Wild angelica	0.5
Holcus lanatus	Yorkshire fog	0.5
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		40
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		*Eriophorum angustifolium*–bare peat cutover bog (BP2)

Plate 2-5 Habitat at Turbine T05

2.6 Turbine T06

Turbine T06 is located on cutover bog (PB4).

Table 2-6 Relevé within the footprint of Turbine T06

Relevé 1	Grid reference: ITM 615667 727925	Date 03/10/2024
Species	**Common Name**	**% Cover**
Vascular Plants		
Molinia caerulea	Purple moor grass	4
Calluna vulgaris	Ling heather	9
Additional relevé data as per Smith at al. 2020[4]		
Sphagnum cover		0
Bare peat cover		87
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm

[4] *Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.*

Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-6 Habitat in the vicinity of Turbine T06

2.7 Turbine T07

Turbine T07 is located on cutover bog (PB4).

Table 2-7 Relevé within the footprint of Turbine T07

Relevé 1	**Grid reference: ITM 614961 727571**	**Date 03/10/2024**
Species	**Common Name**	**% Cover**
Vascular Plants		
Molinia caerulea	Purple moor grass	2
Additional relevé data as per Smith at al. 2020[5]		
Sphagnum cover		0
Bare peat cover		98
Average acrotelm depth (cm)		No acrotelm

[5] *Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.*

Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-7 Habitat in the footprint of Turbine T07

2.8 Turbine T08

Turbine T08 is located on cutover bog (PB4).

Table 2-8 Relevé within the footprint of Turbine T08

Relevé 1	Grid reference: ITM 615375 728345	Date 25/07/2023
Species	Common Name	% Cover
Vascular Plants		
Equisetum arvense	Field horsetail	0.5
Juncus effusus	Soft rush	0.5
Triglochin palustris	Marsh arrowgrass	0.5
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0

Bare peat cover	97
Average acrotelm depth (cm)	No acrotelm
Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-8 Habitat at Turbine 8

2.9 Turbine T09

Turbine T09 is located on cutover bog (PB4).

Table 2-9 Habitat within the footprint of Turbine T09

Relevé 1 (4 x 4)	Grid reference: ITM 616021 728746	Date 25/07/2023
Species	Common Name	% Cover
Vascular Plants		
Rumex obtusifolius	Broadleaved dock	0.5
Tussilago farfara	Colts foot	0.5
Betula pubescens	Downy birch	0.5
Juncus articulatus	Jointed rush	1
Salix cinerea	Grey willow	1

Non-vascular plants		
Polytrichum commune	Common haircap	0.5
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		95
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

Plate 2-9 Habitat at turbine 9

2.10 Turbine T10

Turbine T10 is located on cutover bog (PB4). No vegetation was present within the relevé but soft rush (*Juncus effusus*) was present in the wider area.

Table 2-10 Relevé within the footprint of Turbine T10

Relevé 1	**Grid reference: ITM 615714 729399**	**Date 25/07/2023**
Species	**Common Name**	**% Cover**
Vascular Plants		
NA	NA	0
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		100
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

Plate 2-10 Habitat at Turbine T10

2.11 Turbine T11

Turbine T11 is located on cutover bog (PB4) with no vegetation present.

Table 2-11 Relevé within the footprint of Turbine T11

Relevé 1	Grid reference: ITM 616376 729355	Date 03/10/2024
Species	**Common Name**	**% Cover**
Vascular Plants		
NA	NA	0
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		100
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

Plate 2-11 Habitat in the footprint of Turbine T11

2.12 Turbine T12

Turbine T12 is located on cutover bog (PB4). Standing water is present in the vicinity of the proposed hardstand area. The wider area comprises bare cutover peat recolonising with soft rush (*Juncus effusus),* marsh arrowgrass (*Triglochin palustris)* and sedges (*Carex* sp.)

Table 2-12 Relevé within the footprint of Turbine T12

Relevé 1	Grid reference: ITM 616391 728190	Date 20/07/2025
Species	Common Name	% Cover
Vascular Plants		
Triglochin palustris	Marsh arrowgrass	10
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		90
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		Intermediate
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

Plate 2-12 Habitat in the vicinity of Turbine 12

2.13 Turbine T13

Turbine T13 is located on cutover bog (PB4).

Table 2-13 Relevé within the footprint of Turbine T13

Relevé 1	Grid reference: ITM 616991 728609	Date 25/07/2023
Species	Common Name	% Cover
Vascular Plants		
Eriophorum angustifolium	Common cottongrass	1
Betula pubescens	Downy birch	1
Molinia caerulea	Purple moor grass	1
Chamerion angustifolium	Rosebay willowherb	1
Salix sp.	Willow saplings	1
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		95
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

Plate 2-13 Habitat at Turbine T13

2.14 Turbine T14

Turbine T14 is located on cutover bog (PB4).

Table 2-14 Relevé within the footprint of Turbine T14

Relevé 1	Grid reference: ITM 617352 728186	Date 25/07/2023
Species	Common Name	% Cover
Vascular Plants		
Eriophorum angustifolium	Common cottongrass	10
Betula pubescens	Downy birch	5
Juncus effusus	Soft rush	1
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		80
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry

Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-14 Habitat at Turbine T14

2.15 Turbine T15

Turbine T15 is located on cutover bog (PB4).

Table 2-15 Relevé within the footprint of Turbine T15

Relevé 1 (4 x 4)	Grid reference: ITM 617687 728897	Date 29/06/2023
Species	Common Name	% Cover
Vascular Plants		
Betula pubescens	Downy birch	0.5
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		99
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

Plate 2-15 Habitat at Turbine T15

2.16 Proposed Temporary Construction Compound No. 1

The proposed temporary construction compound no. 1 will be located on bare cutover bog (PB4) habitat in the west of the site.

Table 2-16 Botanical Survey Results

Relevé 1	Grid reference: ITM 612433 727807	18/07/2024
Species	Common Name	% Cover
Vascular Plants		
NA	NA	0
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		100
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

Plate 2-16 Habitat at temporary construction compound 1

2.17 Proposed Temporary Construction Compound No. 2

The proposed temporary construction compound no. 2 near the proposed Turbine T02 is located on cutover bog (PB4).

Table 2-17 Botanical Survey Results

Relevé 1	Grid reference: ITM 614654 727297	Date 10/09/2024
Species	**Common Name**	**% Cover**
Vascular Plants		
Equisetum sp.	Horsetail	30
Betula pubescens	Downy birch	8
Pinus contorta	Lodgepole pine sapling	1
Bare peat		60
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		60

Average acrotelm depth (cm)	No acrotelm
Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-17 Habitat in the footprint of proposed temporary construction compound 2

2.18 Proposed Temporary Construction Compound No. 3

The proposed temporary construction compound no. 3 will be located on recolonising cutover bog (PB4) habitat in the east of the site, north of proposed Turbine T14.

Table 2-18 Botanical Survey Results

Relevé 1	Grid reference: ITM 617257 728462	Date 29/08/2024
Species	Common Name	% Cover
Vascular Plants		
Eriophorum angustifolium	Common cottongrass	15
Bare peat		85

Additional relevé data as per Smith at al. 2020[6]	
Sphagnum cover	0
Bare peat cover	85
Average acrotelm depth (cm)	No acrotelm
Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-18 Habitat at temporary construction compound no. 3

2.19 Proposed Temporary Construction Compound No. 4

The proposed temporary construction compound no. 4 will be located on recolonising cutover bog (PB4) habitat to the north of proposed turbine T10.

[6] *Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.*

Table 2-19 Botanical Survey Results

Relevé 1	ITM 615594 729979	Date 17/07/2024
Species	**Common Name**	**% Cover**
Vascular Plants		
Eriophorum angustifolium	Common cottongrass	20
Campylopus introflexus		0.5
Betula pubescens	Birch saplings	1
Salix cinerea	Willow sapling	0.5
Drosera rotundifolia	Round leaved sundew	0.5
Bare peat		80
Additional relevé data as per Smith at al. 2020[7]		
Sphagnum cover		0
Bare peat cover		80
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

[7] *Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.*

Plate 2-19 Habitat at temporary construction compound no. 4

2.20 Met Mast

The proposed met mast is located on cutover bog (PB4).

Table 2-20 Relevé within footprint of proposed met mast

Relevé 1	Grid reference: ITM 614152 727021	Date 10/09/2024
Species	Common Name	% Cover
Vascular Plants		
Pinus contorta	Lodgepole pine	2
Betula pubescens	Downy birch	2
Bare peat		95
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		95
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry

Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-20 Habitat in the footprint of the proposed met mast

2.21 Proposed Grid Connection Infrastructure

Proposed Grid Connection infrastructure, including new pylons and overhead lines, are located in agricultural fields to the north of the Proposed Project site. The grassland is dominated by Yorkshire fog (*Holcus lanatus)* and perennial ryegrass (*Lolium perenne)* and is categorised as wet agricultural grassland (GA1). Additional relevé data as per Smith et al. (2020) is not required given it is a grassland habitat.

Table 2-21 Relevé within Proposed Grid Connection infrastructure footprint

Relevé 1	**Grid reference: ITM 614605 731182**	**Date 19/08/2024**
Species	**Common Name**	**% Cover**
Vascular Plants		
Holcus lanatus	Yorkshire fog	80
Lolium perenne	Perennial ryegrass	30
Festuca rubra	Red fescue	60
Alopecurus geniculatus	Marsh foxtail	3
Poa trivialis	Rough meadowgrass	4
Agrostis stolonifera	Creeping bent	5

Anthoxanthum odoratum	Sweet vernal grass	5
Trifolium repens	White clover	4
Rumex obtusifolius	Broadleaved dock	2
Epilobium sp.	Willowherb	25

Plate 2-21 Habitat in the vicinity of grid connection infrastructure

2.22 Proposed Amenity Pathways

The eastern most proposed section of amenity track follows an existing track along immature bog woodland (WS2) and scrub (WS1). Species include downy birch (*Betula pubescens),* goat willow (*Salix caprea),* rowan (*Sorbus aucuparia),* ash (*Fraxinus excelsior)* and sycamore (*Acer pseudoplatanus).* The trail turns south-eastwards through bracken (*Pteridium aquilinum)* and scrub and then traverses the open cutover bog habitat (PB4) (Plate 2-22).

The section of proposed amenity trail between proposed Turbines T13, T11 and T09, traverses across open cutover bog (PB4) habitat. It also crosses through dry meadows and grassy verges (GS2) along scrub (WS1) and immature woodlands (WS2) (Plate 2-23).

Plate 2-22 Existing tracks in the vicinity of the proposed amenity trails to the east of the EIAR Site Boundary

Plate 2-23 Proposed amenity trail location through grassy meadow and along scrub habitats within a central area of the site

2.23 Proposed Onsite 220kV Substation and Temporary Construction Compound

The proposed onsite 220kV substation and temporary construction compound 5 will be located on bare and recolonising cutover bog (PB4) habitat.

Table 2-22 Relevé within footprint of Proposed Substation and Temporary Construction Compound

Relevé 1	ITM 614913 730986	Date 18/07/2024
Species	Common Name	% Cover
Vascular Plants		
Calluna vulgaris	Ling heather	70
Betula pubescens	Birch saplings	2
Erica tetralix	Cross leaved heath	20
Molinia caerulea	Purple moor grass	20
Rumex acetosella	Sheep's sorrel	1
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		0
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		*Calluna vulgaris*–bare peat cutover bog (BP1)

Plate 2-24 Habitat at proposed substation and temporary construction compound area

2.24 Peat Deposition Areas

2.24.1 Northern PDA

Table 2-23 Relevé within northern peat deposition area

Relevé 1	ITM 615060 730680	Date 18/07/2024
Species	Common Name	% Cover
Vascular Plants		
Calluna vulgaris	Ling heather	40
Eriophorum angustifolium	Common Cottongrass	10
Betula pubescens	Birch saplings	5
Eriophorum vaginatum	Hares tail Cottongrass	2
Molinia caerulea	Purple moor grass	0.5
Bare peat		60

Additional relevé data as per Smith at al. 2020[8]	
Sphagnum cover	0
Bare peat cover	60
Average acrotelm depth (cm)	No acrotelm
Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-25 Habitat at northern proposed peat deposition area

2.24.2 Southern PDA

Table 2-24 Relevé within southern peat deposition area

Relevé 1	ITM 615810 728986	Date 18/07/2024
Species	Common Name	% Cover
Vascular Plants		

[8] *Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.*

Equisetum arvense	Field horsetail	5
Triglochin palustris	Marsh arrowgrass	10
Tussilago farfara	Colts foot	3
Cirsium palustre	Marsh thistle	0.5
Hypochaeris radicata	Cats ear	2
Bare peat		90
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		90
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry
Habitat classification as per Smith et al. 2020		Bare peat cutover bog (BP3)

Plate 2-26 Habitat within southern peat deposition area

2.25 Borrow pit no. 1 near Turbine T03

The proposed borrow pit near Turbine T03 is located on cutover bog (PB4).

Table 2-25 Relevé within footprint of borrow pit near Turbine T03

Relevé 1	ITM 614580 726672	Date 10/09/2024
Species	Common Name	% Cover
Vascular Plants		
Juncus effusus	Soft rush	10
Tussilago farfara	Colts foot	5
Rubus fruticosus agg	Bramble	5
Taraxacum officinale agg	Dandelion	3
Equisetum sp.	Horsetail	30
Potentilla erecta	Tormentil	2
Cirsium arvense	Creeping thistle	1
Molinia caerulea	Purple moor grass	5
Bare peat		35
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		35
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry

Plate 2-27 Habitat within the footprint of borrow pit near Turbine T03

2.26 Borrow pit no. 2 near Turbine T04

The proposed borrow pit near Turbine T04 is located on cutover bog (PB4).

Table 2-26 Relevé in footprint of borrow pit near Turbine T04

Relevé 1	ITM 615087 727018	Date 10/09/2024
Species	Common Name	% Cover
Vascular Plants		
Calluna vulgaris	Ling heather	20
Leontodon hispidus	Rough hawksbit	40
Achillea millefolium	Yarrow	2
Anthoxanthum odoratum	Sweet vernal grass	1
Potentilla erecta	Tormentil	2
Tussilago farfara	Colts foot	6
Centaurea nigra	Knapweed	8
Non-vascular plants		
Hypnum jutlandicum		12

Polytrichum commune	2
Bare peat	20
Additional relevé data as per Smith at al. 2020	
Sphagnum cover	0
Bare peat cover	20
Average acrotelm depth (cm)	No acrotelm
Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	*Calluna vulgaris*–bare peat cutover bog (BP1)

Plate 2-28 Habitat within footprint of borrow pit near Turbine T04

2.27 Borrow pit no.3 near Turbine T08

The borrow pit near Turbine T08 comprises cutover bog, with recolonising bare peat, grass and scrub communities (GS2 and WS1) and visible rocky outcrops.

Table 2-27 Relevé within footprint of borrow pit near Turbine T08

Relevé 1	ITM 615674 728476	Date 18/07/2024
Species	Common Name	% Cover
Vascular Plants		
Juncus effusus	Soft rush	10
Tussilago farfara	Colts foot	5
Holcus lanatus	Yorkshire fog	60
Hypochaeris radicata	Cats ear	2
Eriophorum angustifolium	Common cottongrass	5
Cirsium palustre	Marsh thistle	2
Cirsium arvense	Creeping thistle	2
Bare peat		20
Additional relevé data as per Smith at al. 2020		
Sphagnum cover		0
Bare peat cover		20
Average acrotelm depth (cm)		No acrotelm
Substrate firmness (firm, soft, very soft, quaking)		firm
Moisture level (wet, intermediate, dry)		dry

Plate 2-29 Habitat at proposed borrowpit near Turbine T08

2.28 Borrow pit near no. 4 Turbine T09

The proposed borrow pit no.4 by T09 comprises grey willow and downy birch scrub (WS1) with large areas of bare peat and soft rush, common reed.

Table 2-28 Relevé within footprint of borrow pit near proposed Turbine T09

Relevé 1	ITM 616002 728938	Date 18/07/2024
Species	Common Name	% Cover
Vascular Plants		
Salix cinerea	Grey willow	3
Betula pubescens	Downy birch	3
Juncus effusus	Soft rush	3
Eriophorum angustifolium	Common cottongrass	5
Holcus lanatus	Yorkshire fog	10
Agrostis stolonifera	Creeping bent	5
Tussilago farfara	Colts foot	10
Bare peat		70

Additional relevé data as per Smith at al. 2020	
Sphagnum cover	0
Bare peat cover	70
Average acrotelm depth (cm)	No acrotelm
Substrate firmness (firm, soft, very soft, quaking)	firm
Moisture level (wet, intermediate, dry)	dry
Habitat classification as per Smith et al. 2020	Bare peat cutover bog (BP3)

Plate 2-30 Habitat at proposed borrow pit near Turbine T09

3. CONCLUSION

A description of relevés undertaken within the footprint of the Proposed Project has been provided within this report. An assessment of the cutover raised bog habitats in line with Smith et al. (2020) has also been provided. The project footprint is dominated by bare peat cutover bog (PB4) or peat with pioneering vegetation. No Annex I habitats occur within the footprint of the Proposed Project.

4. BIBLIOGRAPHY

Commission of the European Communities, 2003, Interpretation manual of European Union habitats - EUR 25. DG Environment *Nature and Biodiversity. Brussels. Commission of the European Communities.

Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Dublin: The Heritage Council.

NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill

Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

Stace, C. A. (2019). New Flora of the British Isles. Cambridge: Cambridge University Press.