APPENDIX 6-1

BOTANICAL REPORT

Planning and Environmental Consultants

Botanical Assessment

Proposed Cahermurphy West Wind Farm

Contents

1. INTRODUCTION

1.1 Introduction

MKO were commissioned to undertake detailed botanical surveys to provide an evaluation and assessment of the habitats occurring on site at the Proposed Cahermurphy West Wind Farm. The detailed assessments focused on the habitats occurring within or immediately adjacent to the Proposed Project footprint. Botanical surveys were undertaken on the 16th and 17th of July 2024, with additional information on habitat mapping undertaken on numerous other dates in 2024 and 2025, as detailed in Section 6.23 of Chapter 6 of the accompanying EIAR.

1.2 Statement of Authority

Field surveys were undertaken by Deepali Mooloo (BSc, MSc), Pádraig Desmond (BSc) and Ciara Lynn Sheehan (BSc). This report has been prepared by Deepali Mooloo and reviewed by Pádraig Desmond and Caroline Kelly.

Deepali Mooloo

Deepali Mooloo is an Ecologist at MKO, having joined the company in September 2023. She holds an M.Sc. (Hons) in Applied Coastal and Marine Management from University College Cork, where she specialized in spatial ecology, field skills, and drone photogrammetry. Deepali's expertise lies in ecology and field surveys, with experience in a range of multidisciplinary assessments. Since joining MKO, she has conducted walkover surveys, marsh fritillary surveys, mammal surveys, winter bird surveys, and botanical surveys, including detailed relevés of plant species in both coastal and terrestrial habitats. She is also skilled in habitat assessments, utilizing Fossitt's Guide to Habitats in Ireland and the ERICA database. Her professional experience includes preparing Appropriate Assessment Screening Reports (AASR), Feasibility Studies, Ecological Impact Assessments (EcIA), and Natura Impact Statements (NIS). She is proficient in detailed habitat and ecological constraints mapping using QGIS and has expertise in cartography using both QGIS and ArcGIS. In 2024, Deepali successfully completed the Marine Mammal Observer Course with IDWG. She also has prior experience working in coastal and marine environments in Mauritius.

Pádraig Desmond

Pádraig is a Project Ecologist with MKO with 5 years post graduate ecological experience, over 4 years of which have been in ecological consultancy. Pádraig holds a BSc (Hons) in Ecology and Environmental Biology from University College Cork. Pádraig took up his position with MKO in December 2021, prior to which he worked as a Junior Ecologist with Envirico. Through these consultancy roles Pádraig has gained excellent experience in producing ecological reports such as Natura Impact Statements, Ecological Impact Assessments, Biodiversity chapters, Invasive Species Management Plans, and Constraints Reports for a wide range of projects including small private developments to housing developments and renewable energy projects such as solar and wind farms. Prior to the above roles, Pádraig worked as a field ecologist for the Department of Conservation in New Zealand, where he developed a strong field-based skill set.

Pádraig's key strengths and areas of expertise are in terrestrial ecology, including vegetation surveys, habitat identification, invasive species surveys, mammal surveys, Appropriate Assessment and Ecological Impact Assessment. Pádraig is also skilled in GIS.

Caroline Kelly

Caroline is a Senior Ecologist with MKO with over nine years' experience in ecological consultancy and is a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Caroline holds a BSc in Environmental Biology from University College Dublin (UCD) and an MSc in Applied Ecological Assessment from University College Cork (UCC). In addition, Caroline has completed an Advanced Diploma in Planning and Environmental Law from Kings Inns Dublin. Prior to taking up her position with MKO in June 2025, Caroline worked as a Principal Ecologist with Scott Cawley Ltd. Caroline has strong generalist field ecology skills and has undertaken a range of ecological surveys including habitat, bird (both breeding and wintering), invasive species and protected fauna surveys. She has strong technical reporting skills and has extensive experience in a range of ecological assessments including Appropriate Assessment and Ecological Impact Assessment. She has undertaken ecological assessments and surveys on a variety of project types (e.g. linear infrastructure projects, industrial, commercial, residential, recreational, tourism and renewable energy developments).

2. SURVEY METHODS

A total of 10 detailed relevés[1] were undertaken within representative habitats at each turbine base and associated Proposed Wind Farm infrastructure. However, where infrastructure was located within forestry monocultures, which presented low ecological value and was unlikely to conform to any Annex I habitat, no relevés were undertaken. The location of each relevé is provided on Figure 1-1.

Habitats were assessed and described using both Fossitt (Fossitt, 2000) and the Irish Vegetation Classification (IVC) (Perrin et al., 2018) system. Where habitats had the potential to correspond to Annex 1 habitat types further detailed assessment of those habitats was also undertaken in line with the condition assessment methods outlined in Martin et al. (2018), while reference was also made to the EU interpretation manual (EC, 2013).

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

- *Perrin, P.M, Martin, J.R., Barron, J.R., Roche & 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.*

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

- *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*

[1] *Relevés, or survey plots, included 2m x 2m (for grassland and peat habitats) or 10m x 10m (for woodland) sample areas within which all species and their percentage cover was recorded. Physical characteristics and Irish Grid reference were also noted for each relevé.*

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

A fundamental requirement of the IVC is to "aid in definition and identification of EU Habitat Directive (92/43/EEC) Annex I habitats" and to 'inform the planning process, for example through environmental impact assessments'.

The Engine for Relevés to Irish Communities Assignment (ERICA) is a web application for assigning vegetation data to communities defined by the Irish Vegetation Classification (IVC). Data can be uploaded, checked for errors and analysed and the results can then be downloaded. ERICA works with both quantitative vegetation cover data (such as are recorded in relevés and other types of botanical recording plots) and presence/absence data, such as species lists. ERICA covers grasslands, woodland, duneland, heaths, bogs, fens, mires, freshwater, saline waters, rocky habitats, scrub, strandline, saltmarsh and weed communities (Perrin, 2019[2]).

The data collected from the botanical assessments was uploaded to ERICA, analysed and the resulting data downloaded.

The analysis procedure uses a clustering process to assign classification affinity to vegetation plots based on a degree of membership to each of the communities defined by the IVC. Table 2-1 details the categorizing types of plots utilizing the clustering analysis. This categorizing procedure was utilized to determine if the grassland plots within the study area had affinity to Annex I grassland and whether further assessment was required.

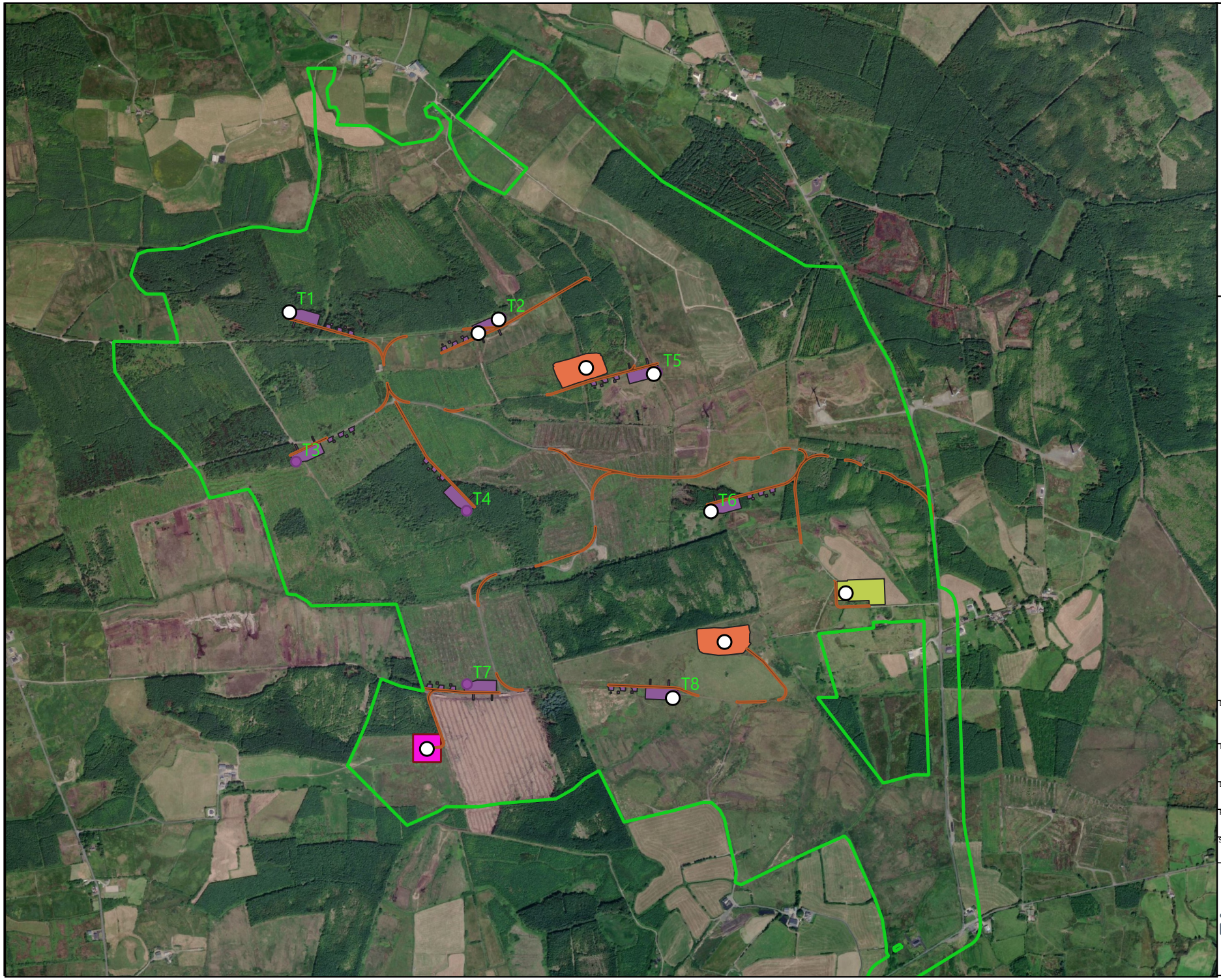
Table 2-1 Categorising types of plots using clustering analysis (after Wiser & de Cáceres, 2013[3]).

Plot Type	Definition
Assigned	The plot has membership ≥ 0.5 for one of the vegetation communities and therefore relates to the core definition of that vegetation community.
Unassigned	The plot has membership ≥ 0.5 for the noise class and is poorly represented by the current classification scheme
Transitional	The plot has membership < 0.5 for all vegetation communities and for the noise class. It falls within the scope of the current classification scheme but does not relate to the core definition of any of the vegetation communities.

Detailed relevés were undertaken within habitats which presented higher ecological value and had potential to conform to Annex I habitats. Detailed relevés were not undertaken in habitats which would not be impacted by the Proposed Wind Farm footprint, and within habitats which presented low ecological value and low species diversity.

[2] *Perrin, 2019, Engine for Relevés to Irish Communities Assignment (ERICA), Online, Available at: https://biodiversityireland.shinyapps.io/vegetation-classification/_w_ab62059c/manual.pdf, Accessed, 20/01/2026.*

[3] *Wiser, S.K., De Cáceres, M. (2013) Updating vegetation classifications: an example with New Zealand's woody vegetation, Journal of Vegetation Science, 24, 80-93.*



Map Legend

- EIAR Site Boundary
- Releve locations
- Proposed Turbine Location
- Proposed Substation
- Proposed Met Mast Location
- Proposed Borrow Pits
- Proposed New Roads

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Drawing Title
Releve location Map of the Proposed Wind Farm

Project Title
Cahermurphy West Wind Farm

Drawn By	Checked by
DM	PD
Project No.	Drawing No.
230843	Figure 3-1
Scale	Date
1:15,000	21.01.2026

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3. RESULTS

The Proposed Project has been designed to maximise usage of existing internal roads and heavily modified habitats such as forestry. As such, the majority of the construction footprint is located within areas of Conifer Plantation (WD4), Recently felled woodland (WS5), Wet grassland (GS4), Spoil and bare ground (ED2), and Recolonising bare ground (ED3). The results of the relevé surveys undertaken are presented in the following sections (Section 3.1 to Section 3.11).

3.1 Turbine 1

Turbine 1 is located in area of Recently felled woodland (WS5) and surrounded by areas of Conifer Plantation (WD4) and existing tracks of Spoil and bare ground (ED2). Table 3-1 provides the botanical assessment undertaken within the footprint of Turbine 1 and its associated hardstands. The footprint of this component of the Proposed Wind Farm is depicted in Plate 3-1 and Plate 3-2.

Table 3-1 Botanical Survey Results – Turbine 1

Relevé 1	ITM: *52.770997, -9.366860*	Date 16/07/24
Species	**Common Name**	**% Cover**
Vascular Plants		
Picea sitchensis	Sitka spruce saplings	*10*
Cardamine flexuosa	Wavy bittercress	*1*
Rubus fruticosus agg.	Bramble	*5*
Ranunculus repens	Creeping buttercup	*1*
Chamaenerion angustifolium	Willowherb	*5*
Urtica dioica	Nettle	*3*
Juncus effusus	Soft rush	*5*
Betula pendula	Birch saplings	*2*
Juncus acutiflorus	Sharp flowered rush	*5*
Bare ground		*80*

Fossitt (2000) Habitat Classification	*Recently felled woodland (WS5)*
IVC (Irish Vegetation Community classification)	WL5A - *Picea sitchensis forest*
Affinity to Annex I habitat	No – Given the highly modified and disturbed nature, relatively low diversity value, and dominance of non-native species (Sitka spruce), this habitat does not conform to any Annex I habitat.

Plate 3-1 Example of the receiving habitat at Turbine 1

Plate 3-2 Example of the receiving habitat at Turbine 1

3.2 Turbine 2

Turbine 2 is predominantly located within rush dominated Wet grassland (GS4) and is surrounded by Conifer plantation (WD4) to the north. The turbine hardstand has slight overlap with an area of Wet grassland (GS4) which presented higher diversity. Botanical surveys conducted within the footprint of Turbine 2 and its associated hardstand are presented in Tables 3-2 and 3-3, accordingly. The footprint of this element of the Proposed Project is illustrated in Plates 3-3 and 3-4.

Table 3-2 Botanical Survey Results – Turbine 2

Relevé 2	ITM: 52.770832, -9.357418	Date 16/07/24
Species	**Common Name**	**% Cover**
Vascular Plants		
Rubus fruticosus agg.	Bramble	*2*
Ranunculus repens	Creeping buttercup	*10*
Potentilla erecta	Tormentil	*10*
Juncus effusus	Soft rush	*60*
Juncus conglomeratus	Compact rush	*7*
Molinia caerulea	Purple moor grass	*2*
Juncus acutiflorus	Sharp flowered rush	*5*
Holcus lanatus	Yorkshire fog	*3*
Anthoxanthum odoratum	Sweet vernal grass	*10*
Carex flacca	Glaucous sedge	*20*
Trifolium repens	White clover	*5*
Agrostis sp.	*Agrostis sp.*	*5*
Bare ground		*5*
Fossitt (2000) Habitat Classification	Wet grassland (GS4)	
IVC (Irish Vegetation Community classification)	GL2B - *Juncus effusus – Holcus lanatus* grassland	
Affinity to Annex I habitat	No – Given the highly modified and disturbed nature, relatively low diversity value, and absence of typical indicator species of Annex I grasslands, this habitat does not conform to any Annex I habitat.	

Plate 3-3 Example of the receiving habitat at Turbine 2

Table 3-3 Botanical Survey Results –Hardstand of Turbine 2

Relevé 3	ITM: 52.770526, -9.358101	Date 16/07/24
Species	**Common Name**	**% Cover**
Vascular Plants		
*Molinia caerulea**	Purple moor grass	2
*Orchis**	Orchids	10
*Potentilla erecta**	Tormentil	30
*Succisa pratensis**	Devil's bit scabious	2
Anthoxanthum odoratum	Sweet vernal grass	40
*Juncus articulatus**	Jointed rush	25
Festuca rubra	Red fescue	10
Eriophorum angustifolium	Common cottongrass	5
*Carex panicea**	Carnation sedge	5
Lysimachia tenella	Bog pimpernel	10
*Carex echinata**	Star sedge	2
Scorzoneroides autumnalis	Autumn hawksbit	5
Sphagnum sp.	*Sphagnum sp.*	30
*Carex flacca**	Glaucous sedge	1
Juncus effusus	Soft rush	15

Fossitt (2000) Habitat Classification	Wet grassland (GS4)
IVC (Irish Vegetation Community classification)	GL1C – *Molinia caerulea – Succisa pratensis grassland*
Affinity to Annex I habitat	Yes - 6410 Molinia meadows, 8 indicator species (denoted by *) recorded, including one high quality positive indicator (orchid).

Plate 3-4 Example of species-rich Wet Grassland (GS4) within the hardstand of Turbine 2

3.3 Turbine 3 and Turbine 4

Turbine 3 and Turbine 4, as well as their associated hardstanding, are located within areas of Conifer Plantation (WD4). These habitats are dominated by maturing Sitka spruce, with a species poor understory. Given the dominance of conifer trees, no relevés were taken at these turbine locations. Small sections of Scrub (WS1) and Recolonising bare ground (ED3) were also recorded within the footprint of Turbine 3. The footprint of Turbine 3 is indicated in Plate 3-5, with Turbine 4 shown in Plate 3-6.

Plate 3-5 Example of the receiving habitat at Turbine 3

Plate 3-6 Example of the receiving habitat at Turbine 4

3.4 Turbine 5

Turbine 5 is located in an area of Wet heath (HH3), Lowland blanket bog (PB3) and Cutover bog (PB4) mosaic bordered by Conifer plantation (WD4). Table 3-4 provides the botanical assessment undertaken within the footprint of Turbine 5 and its associated hardstands. The footprint of this component of the Proposed Wind Farm is depicted in Plate 3-7.

Table 3-4 Botanical Survey Results – Turbine 5

Relevé 4	ITM: 52.769458, -9.350431	Date 16/07/24
Species	**Common Name**	**% Cover**
Vascular Plants		
Picea sitchensis	Sitka spruce saplings	*2*
*Calluna vulgaris***	Ling heather	*8*
*Erica tetralix***	Cross-leaved heath	*15*
Cardamine flexuosa	Wavy bittercress	*1*
Rubus fruticosus agg.	Bramble	*3*
Ranunculus repens	Creeping buttercup	*<1*
Chamaenerion angustifolium	Willowherb	*5*
Urtica dioica	Nettle	*3*
Potentilla erecta	Tormentil	*8*
Juncus effusus	Soft rush	*5*
Betula pendula	Silver birch saplings	*2*
Juncus acutiflorus	Sharp flowered rush	*5*
Luzula multiflora	Heath wood-rush	10
*Eriophorum vaginatum***	Hare's tail cotton grass	30
Festuca rubra	Red fescue	15
*Eriophorum angustifolium***	Common cotton grass	5
Plagiothecium undulatum	*Plagiothecium undulatum*	1
*Succisa pratensis**	Devil's bit scabious	2
*Narthecium ossifragum***	Bog asphodel	15
*Drosera rotundifolia***	Round-leaved sundew	10
*Rhynchospora alba***	White beak sedge	5
*Myrica gale***	Bog myrtle	10
*Carex echinata**	Star sedge	5
Juncus articulatus	Jointed rush	2
*Trichophorum germanicum***	Deergrass	10
*Sphagnum spp.***	Sphagnum	7
Polytrichum spp.	Polytrichium	2
*Pleurozium schreberi***	*Pleurozium schreberi*	2

Fossitt (2000) Habitat Classification	Wet Heath (HH3)/ Lowland blanket bog (PB3)/ Cutover bog (PB4) mosaic
IVC community classification	HE2E *Calluna vulgaris – Trichophorum cespitosum/germanicum* heath
Affinity to Annex I habitat	Yes – This IVC community has an affiliation with Annex I habitats 4010 Wet heath, 4060 Alpine and subalpine heath, and 7130 Blanket bog (active). Whilst degraded due to historical turbary, given the presence of 13 indicator species (denoted by *) of 4010 Wet heath with *Erica tetralix* and 10 indicator species of 7130 Blanket bog (active) (denoted by **), the habitat at Turbine 5 is a mosaic of both Annex I habitats.

Plate 3-7 Example of the receiving habitat at Turbine 5

3.5 Turbine 6

Turbine 6 is primarily located within Conifer plantation (WD4), with the associated hardstand encroaching marginally into a transitional area adjoining Wet willow–alder–ash woodland (WN6). Due to the dominance of Sitka spruce within the plantation, a relevé was undertaken within the transitional area between the forestry plantation and the Wet willow–alder–ash woodland (WN6). This location was selected as the turbine footprint is predominantly located to the Conifer plantation, as detailed in Table 3-5. The footprint of this turbine is depicted in Plate 3-8, with Plate 3-9 showing the adjoining Wet willow–alder–ash woodland (WN6) habitat.

Table 3-5 Botanical Survey Results – Turbine 6

Relevé 5	ITM: 52.765596, -9.347737	Date 17/07/24
Species	**Common Name**	**% Cover**
Vascular Plants		
Picea sitchensis	Sitka spruce	75
Salix aurita	Eared willow	10
Pteridium aquilinum	Bracken	7
Equisetum sp.	Horsetail	5
Carex remota	Remote sedge	2
Rubus fruticosus agg.	Bramble	5
Epilobium ciliatum	Fringed willowherb	5
Poa sp.	Meadow grass	10
Festuca rubra	Red fescue	2
Juncus effusus	Soft rush	7
Fossitt (2000) Habitat Classification	WD4 Conifer plantation	

IVC community classification	WL5A - *Picea sitchensis forest*
Affinity to Annex I habitat	No- Given the highly modified and disturbed nature, relatively low diversity value, and dominance of non-native species (Sitka spruce), this habitat does not conform to any Annex I habitat.

Plate 3-8 Dominant habitat within which Turbine 6 will be located

Plate 3-9 Example of adjoining habitat within which a small section of Turbine 6 footprint will be located.

3.6 Turbine 7

Turbine 7, as well as it's associated hardstanding, is located entirely within Conifer plantation (WD4). This habitat was dominated by second rotation immature Sitka spruce, with a species poor understory. Given the monoculture of Conifer plantation (WD4), no relevé was taken in this habitat. The footprint of Turbine 7 is depicted in Plate 3-10.

Plate 3-10 Example of the receiving habitat at Turbine 7

3.7 Turbine 8

Turbine 8 is located in an area of Wet grassland (GS4). Table 3-6 provides the botanical assessment undertaken within the footprint of Turbine 8 and its associated hardstands. The footprint of this component of the Proposed Wind Farm is depicted in Plate 3-11.

Table 3-6 Botanical Survey Results – Turbine 8

Relevé 6	**ITM: 52.760465, -9.349111**	**Date 17/07/24**
Species	**Common Name**	**% Cover**
Vascular Plants		
Rubus fruticosus agg.	Bramble	45
Calluna vulgaris	Ling heather	15
Holcus lanatus	Yorkshire fog	20
Juncus effusus	Soft rush	40
Potentilla erecta	Tormentil	10
Anthoxanthum odoratum	Sweet vernal	5
Carex panicea	Carnation sedge	2
Carex brunnescens	Brown sedge	2
Festuca rubra	Red fescue	7
Erica cinerea	Bell heather	3
Fossitt (2000) Habitat Classification	GS4 Wet grassland	
IVC community classification	GL2D- *Juncus effusus – Rumex acetosa* grassland	
Affinity to Annex I habitat	No – This section of the Proposed Wind Farm was highly modified and disturbed in nature, had relatively low species diversity, and typical indicator species of Annex I grasslands	

	were absent. Therefore, this habitat does not conform to any Annex I habitat.

Plate 3-11 Example of the receiving habitat at Turbine 8

3.8 Substation

The location of the proposed substation comprised of a mosaic of Improved agricultural grassland (GA1) and Wet grassland (GS4) with patches of Scrub (WS1). The species recorded within this habitat are presented in Table 3-7 below. The footprint of this component of the Proposed Wind Farm is depicted in Plate 3-12.

Table 3-7 Botanical Survey – Substation

Relevé 7	ITM: 52.763353, -9.341489	Date 17/07/24
Species	**Common Name**	**% Cover**
Vascular Plants		
Urtica dioica	Nettle	*2*
Ranunculus repens	Creeping buttercup	*15*
Cirsium vulgare	Bull thistle	*5*
Juncus effusus	Soft rush	*45*
Holcus lanatus	Yorkshire fog	*25*
Trifolium repens	White dover	*3*
Epilobium sp.	Willow herb	3
Festuca rubra	Red fescue	7
Rubus fruticosus agg.	Bramble	15
Ranunculus acris	Meadow buttercup	5
Juncus acutiflorus	Sharp flowered rush	3
Juncus articulatus	Jointed rush	3

Alopecurus pratensis	Meadow foxtail	0.5
Agrostis sp.	Bent grass	3
Pteridium aquilinum	Bracken	2
Salix cinerea	Grey willow	0.5
Epilobium palustre	Marsh willowherb	1
Sphagnum rubellum	*Sphagnum rubellum*	7
Rumex acetosa	Common sorrel	2
Anthoxanthum odoratum	Sweet vernal grass	15
Fossitt (2000) Habitat Classification	GS4 Wet grassland	
IVC community classification	GL2B - *Juncus effusus – Holcus lanatus* grassland	
Affinity to Annex I habitat	No – This section of the Proposed Wind Farm was highly modified and disturbed in nature, had relatively low species diversity, and typical indicator species of Annex I grasslands were absent. Therefore, this habitat does not conform to any Annex I habitat.	

Plate 3-12 Example of the receiving habitat at substation

3.9 Borrow pit (between T6 and T8)

The location of the proposed borrow pit, between turbine location T6 and T8, comprised of Wet grassland (GS4) and patches of gorse Scrub (WS1). The species within this habitat are recorded in Table 3-8 below. The footprint of this component of the Proposed Wind Farm is depicted in Plate 3-13.

Table 3-8 Botanical Survey – borrow pit

Relevé 8	ITM: 52.762117, -9.347059	Date 17/07/24
Species	**Common Name**	**% Cover**
Vascular Plants		
Ulex europaeus	Gorse	*10*
Rubus fruticosus agg.	Bramble	*20*
Festuca rubra	Red fescue	10
Holcus lanatus	Yorkshire fog	15
Anthoxanthum odoratum	Sweet vernal grass	15
Agrostis spp.	Bent grasses.	5
Urtica dioica	Nettle	1
Trifolium repens	White clover	2
Rumex acetosa	Sorrel	7
Ranunculus repens	Creeping buttercup	5
Ranunculus acris	Meadow buttercup	5
Scorzoneroides autumnalis	Autumn hawksbit	2
Carex flacca	Glaucous sedge	1
Juncus effusus	Soft Rush	55

Fossitt (2000) Habitat Classification	GS4 Wet grassland
IVC community classification	GL2B - *Juncus effusus – Holcus lanatus* grassland
Affinity to Annex I habitat	No – This section of the Proposed Wind Farm was highly modified and disturbed in nature, had relatively low species diversity, and typical indicator species of Annex I grasslands were absent. Therefore, this habitat does not conform to any Annex I habitat.

Plate 3-13 Example of the receiving habitat at borrow pit

3.10 Borrow pit (west of T5)

The location of the proposed borrow pit, west of Turbine location T5, falls partly on degraded Wet heath (HH3) habitat, currently a fire break between forestry blocks, while the majority falls within Conifer plantation (WD4). Given the dominance of Sitka spruce within the Conifer plantation (WD4), a relevé was only taken from the narrow strip of Wet heath (HH3). The species within this habitat are recorded in Table 3-9 below. The footprint of this component of the Proposed Wind Farm is depicted in Plate 3-14.

Table 3-9 Botanical Survey – borrow pit

Relevé 9	ITM: 52.769522, -9.353359	Date 16/07/24
Species	Common Name	% Cover
Vascular Plants		
*Myrica gale**	Bog myrtle	30
Molinia caerulea	Purple moor grass	25
*Eriophorum vaginatum**	Hare's tail cotton grass	15
Anthoxanthum odoratum	Sweet vernal	15
Festuca rubra	Red fescue	10
Potentilla erecta	Tormentil	5
*Erica tetralix**	Cross-leaved heath	30
*Erica cinerea**	Bell heather	2
Luzula multiflora	Heath wood rush	3
*Succisa pratensis**	Devil's bit Scabious	1
*Calluna vulgaris**	Ling heather	10
*Narthecium ossifragum**	Bog asphodel	2

Fossitt (2000) Habitat Classification	HH3 Wet heath
IVC community classification	HE4F – *Molinia caerulea – Myrica gale flush*
Affinity to Annex I habitat	4010 Wet heath
4010 Wet heath condition assessment	Yes - 4010 Wet heath. While this area was dominated by purple moor grass with encroaching gorse, and no *Sphagnum* or pleurocarpous mosses, nor any *Cladonia* species, were recorded, which is likely due to the drainage from existing forestry, 7 indicator species (denoted by *) were recorded within the relevé and therefore it satisfies the conditions for Annex I Wet heath with *Erica tetralix,* albeit in a degraded condition.

Plate 3-14 Example of the receiving habitat at borrow pit west of Turbine 5.

3.11 Meteorological mast

The location of the proposed Meteorological mast comprised of a mosaic of Improved agricultural grassland (GA1) and Wet grassland (GS4). The species within this habitat are recorded in Table 3-10 below. The footprint of this component of the Proposed Wind Farm is depicted in Plate 3-15.

Table 3-10 Botanical Survey – Meteorological Mast

Relevé 10	ITM: 52.759112, -9.360275	Date 17/07/24
Species	Common Name	% Cover
Vascular Plants		
Ranunculus repens	Creeping buttercup	*15*
Cirsium vulgare	Bull thistle	*2*
Juncus effusus	Soft rush	*45*
Holcus lanatus	Yorkshire fog	*20*
Trifolium repens	White dover	*2*
Ranunculus acris	Meadow buttercup	5
Scorzoneroides autumnalis	Autumn hawksbit	4
Potentilla erecta	Tormentil	5
Agrostis sp.	Agrostis sp.	7
Rumex acetosa	Common sorrel	2
Anthoxanthum odoratum	Sweet vernal grass	5
Fossitt (2000) Habitat Classification	GS4 Wet grassland	
IVC community classification	GL2B - *Juncus effusus – Holcus lanatus* grassland	
Affinity to Annex I habitat	No – This section of the Proposed Wind Farm was dominated with soft rush, had relatively low species diversity, and an absence of	

	typical indicator species of Annex I grasslands. This habitat does not conform to any Annex I habitat.

Plate 3-15 Example of the receiving habitat at met mast

3.12 Temporary Construction Compound

The proposed temporary construction compound is predominantly located within Conifer plantation (WD4) mainly composed of Sitka spruce (*Picea sitchensis*) and Japanese larch (*Larix kaempferi)*. Given the low species diversity and modified nature of the habitat, no relevé data was taken in this area.

3.13 New access roads

New access roads within the site are proposed within areas of Sitka spruce (*Picea sitchensis)* classified as Conifer plantation (WD4) and Recently felled woodland (WS5). The forestry is typically mature or recently felled and the species poor forest floor is heavily shaded with occasional patches of *Thuidium tamariscinum* moss. In areas of Recently felled woodland (WS5), stumps of forestry remained with colonising *Juncus* spp. Wet grassland (GS4) and willow/bramble scrub establishing. No relevé data was taken from these habitats due to the dominance of Sitka spruce and/or general low diversity of flora.

4. BIBLIOGRAPHY

British Bryological Society (2010), Mosses and Liverworts of Britain and Ireland: A Field Guide. British Bryological Society

European Commission (2013). Interpretation manual of European Union Habitats. EUR 28.

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

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

Perrin et al., (2018). Irish Vegetation Classification (IVC) – An Overview of Concepts, Structure and Tools. In Practice, CIEEM. December 2018, pp 15-19.

Perrin (2019). Irish Vegetation Classification ERICA – Engine for Relevés to Irish Communities Assignment V5.0 User's Manua

Perrin, P.M, Martin, J.R., Barron, J.R., Roche & 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.

Stace, C.A. (2019). New Flora of the British Isles (4th ed.). Middlewood Green, Suffolk: C&M Floristics.