



REVISED NIS APPENDIX 7

BOTANICAL SURVEY REPORT

Revised NIS Appendix 7 - Botanical Survey Report

Laurclavagh Renewable
Energy Development,
Co.Galway





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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 at the Proposed Project footprint. The detailed assessments focused on the habitats occurring within and adjacent to the Proposed Project footprint. The detailed botanical surveys were undertaken on the 4th of July 2022, 11th of July 2022, 20th of September 2022, and 17th of August 2023.

1.2 Survey Methods

A total of 19 relevés were undertaken within the Proposed Project footprint or representative habitats within the Site. The location of each is provided on Figure 1-1.

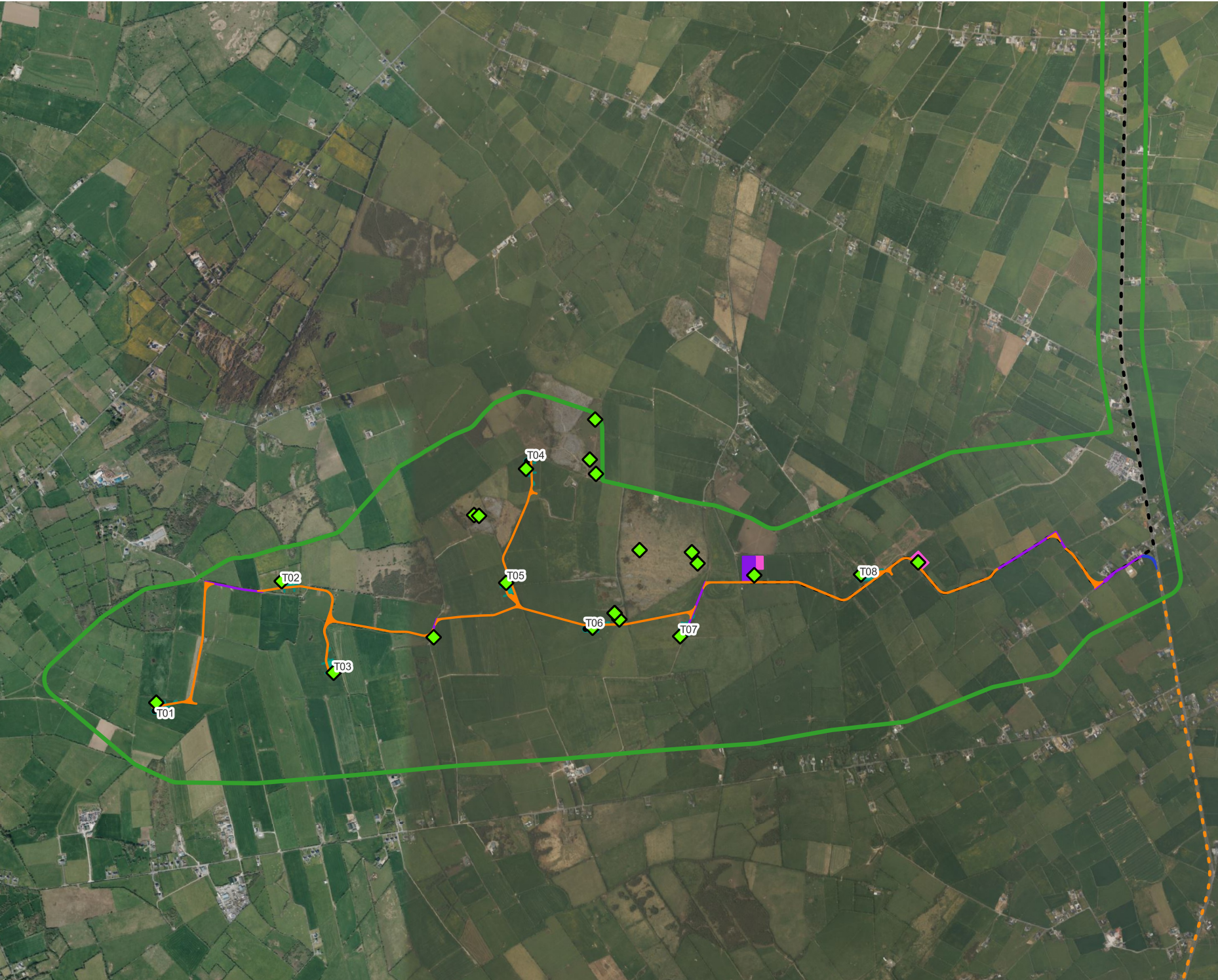
Relevés that were undertaken in limestone pavement, calcareous grassland and associated habitats were undertaken in line with the following guidance documents:

- › Martin, J.R., O'Neill, F.H. & Daly, O.H. (2018), *The monitoring and assessment of three EU Habitats Directive Annex I grassland habitats*. Irish Wildlife Manuals, No. 102. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, 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.
- › Wilson, S. & Fernández, F. (2013) *National survey of limestone pavement and associated habitats in Ireland*. Irish Wildlife Manuals, No. 73. 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, 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 Rachel Walsh (BSc., Env), Cillian Burke (BSc. Env) and Brónagh Boylan (BSc. Env). Rachel is an experienced Ecologist with over 3 years' experience in habitat surveying and ecological assessment. Cillian and Brónagh are qualified ecologists with over 1 years' experience in habitat surveys and assessment and were under the supervision of Rachel during the surveys. This report has been 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

- Relevé Locations
- Temporary Construction Compound
- Turbine Location
- Turbine Delivery Route
- Substation
- Hardstands
- Grid Connection Underground Cabling Route
- Met Mast
- EIA Site Boundary
- Temporary Road
- Proposed Roads
- Existing Roads For Upgrade

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Drawing Title

Relevé Locations

Project Title	
Laurclavagh Renewable energy Development	
Drawn By	Checked By
RW	JH
Project No.	Drawing No.
210627	Figure 1-1
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2.

RESULTS

2.1

Proposed Wind Farm Infrastructure

2.1.1

Turbine 1

Turbine 1 will be located on improved agricultural grassland (GA1) with hedgerows of hawthorn (*Crataegus monogyna*) and stone walls (BL1) along the south, east and west boundaries. The sward is species poor and dominated by perennial rye grass (*Lolium perenne*) with occasional broad-leaved dock (*Rumex obtusifolius*). Other species present outside of the recorded relevé include creeping thistle (*Cirsium arvense*) and white clover (*Trifolium repens*).

Table 2-1 Relevé results in the footprint of T1

Relevé 1	Grid reference: ITM 534728 743177	Date 11/07/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Rumex obtusifolius</i>	Broad-leaved dock	20
<i>Lolium perenne</i>	Perennial rye grass	90
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C <i>Holcus lanatus</i> - <i>Lolium perenne</i>



Plate 2-1 Improved agricultural grassland in the footprint of T1

2.1.2

Turbine 2

Turbine 2 is within improved agricultural grassland bordered with hawthorn hedgerows and stone walls.

Table 2-2 Relevé results within Turbine 2

Relevé 1	Grid reference: ITM 535361 743790	Date 11/07/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Lolium perenne</i>	Perennial rye grass	70
<i>Ranunculus repens</i>	Creeping buttercup	20
<i>Taraxacum officinale agg.</i>	Dandelion	40
<i>Trifolium repens</i>	White clover	5
<i>Holcus lanatus</i>	Yorkshire fog	5
<i>Rumex obtusifolius</i>	Broad-leaved dock	10
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL2C <i>Holcus lanatus</i> - <i>Lolium perenne</i>



Plate 2-2 Improved agricultural grassland in the footprint of Turbine 2

2.1.3

Turbine 3

Turbine 3 is within improved agricultural grassland (GA1) bordered with hawthorn hedgerows (WL1) and stone walls (BL1).

Table 2-3 Relevé results for Turbine 3

Relevé 1	Grid reference: ITM 535623 743328	Date 11/07/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Lolium perenne</i>	Perennial rye grass	90
<i>Rumex obtusifolius</i>	Broad-leaved dock	55
<i>Bellis perennis</i>	Daisy	5
<i>Trifolium repens</i>	White clover	20
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL3B <i>Lolium perenne</i> - <i>Trifolium repens</i>



Plate 2-3 Habitat within the footprint of Turbine 3

2.1.4 Turbine 4

Turbine 4 is located within Improved Agricultural Grassland (GA1) surrounded by stone wall (BL1) boundaries.

Table 2-4 Relevé results at Turbine 4

Relevé 1	Grid reference: ITM 536594 744357	Date 20/09/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Lolium perenne</i>	Perennial Rye Grass	70
<i>Ranunculus repens</i>	Creeping buttercup	10
<i>Trifolium repens</i>	White clover	15
<i>Cerastium fontanum</i>	Mouse-ear chickweed	1
<i>Taraxacum officinale</i> agg.	Dandelion	1
<i>Trifolium pratense</i>	Red clover	5
<i>Plantago lanceolata</i>	Ribwort plantain	1
Fossitt (2000) Habitat Classification		Improved Agricultural Grassland (GA1)
IVC community		WE1D <i>Lolium perenne</i> - <i>Anagallis arvensis</i> (transitional)



Plate 2-4 Habitat within the footprint of Turbine 4

2.1.5 Turbine 5

Turbine 5 is located on Improved Agricultural Grassland (GA1) adjacent to a stone wall (BL1) and a gappy hawthorn hedgerow (WL1).

Table 2-5 Relevé results at Turbine 5

Relevé 1	Grid reference: ITM 536494 743782	Date 20/09/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Lolium perenne</i>	Perennial Rye Grass	80
<i>Ranunculus repens</i>	Creeping buttercup	5
<i>Trifolium repens</i>	White clover	20
Fossitt (2000) Habitat Classification		Improved Agricultural Grassland (GA1)
IVC community		GL3B <i>Lolium perenne</i> - <i>Trifolium repens</i> (transitional)



Plate 2-5 Habitat within the footprint of Turbine 5

2.1.6 Turbine 6

Turbine 6 is located within an open area of Improved Agricultural Grassland (GA1).

Table 2-6 Relevé results at Turbine 6

Relevé 1	Grid reference: ITM 536930 743555	Date 20/09/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Lolium perenne</i>	Perennial Rye Grass	70
<i>Ranunculus repens</i>	Creeping buttercup	5
<i>Trifolium repens</i>	White clover	35
<i>Cynosurus cristatus</i>	Crested dogs tail	20
<i>Cirsium arvense</i>	Creeping thistle	25
<i>Cerastium fontanum</i>	Mouse-ear chickweed	1
Fossitt (2000) Habitat Classification		Improved Agricultural Grassland (GA1)
IVC community		GL3B <i>Lolium perenne</i> - <i>Trifolium repens</i>



Plate 2-6 Habitat within the footprint of Turbine 6

2.1.7

Turbine 7

Turbine 7 is located within an open area of improved agricultural grassland (GA1) and farm tracks (ED2).

Table 2-7 Relevé results for T7

Relevé 1	Grid reference: ITM 537372 743512	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Lolium perenne</i>	Perennial rye grass	20
<i>Holcus lanatus</i>	Yorkshire fog	20
<i>Ranunculus repens</i>	Creeping buttercup	10
<i>Trifolium pratense</i>	Red clover	5
<i>Plantago lanceolata</i>	Ribwort plantain	10
<i>Cynosurus cristatus</i>	Crested dogs tail	5
<i>Prunella vulgaris</i>	Self heal	10
<i>Taraxacum officinale</i> agg.	Dandelion	10
<i>Rumex crispus</i>	Curled leaf dock	5
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		GL3C <i>Holcus lanatus</i> - <i>Lolium perenne</i> (transitional)



Plate 2-7 Habitat in the footprint of Turbine 7

2.1.8

Turbine 8

Turbine 8 is located within a field which in 2022 was planted with crop (*Brassicaceae*) and categorised under Horticultural land (BC2), but in 2023 had been resown with perennial rye grass (*Lolium perenne*) and re-categorised as improved agricultural grassland (GA1). The field is surrounded by stone walls (BL1). A group of 6 mature ash (*Fraxinus excelsior*) are present along the northern stone wall boundary. Hedgerow (WL1) of hawthorn (*Crataegus monogyna*) is present along the western boundary of this field. Within the field to the west is a mosaic of dense bracken (HD1) and dry meadow (GS2) habitat. To the west again of this area is a small area of immature woodland (WS2) dominated by hawthorn.

Table 2-8 Relevé results for turbine 8

Relevé 1	Grid reference: ITM 538285 743824	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Lolium perenne</i>	Perennial rye grass	80
<i>Chenopodium album</i>	Fat hen	15
<i>Taraxacum officinale</i> agg.	Dandelion	10
<i>Senecio vulgaris</i>	Groundsel	8
<i>Persicaria amphibia</i>	Amphibious bistort	3
<i>Stellaria media</i>	Common chickweed	8
<i>Trifolium repens</i>	White clover	5
<i>Sonchus</i> sp.	Sowthistle	2
<i>Rumex obtusifolius</i>	Broad-leaved dock	1
Fossitt (2000) Habitat Classification		Improved agricultural grassland (GA1)
IVC community		WE1E <i>Poa annua</i> - <i>Plantago major</i> (transitional)



Plate 2-8 Improved agricultural grassland (GA1) in the footprint of Turbine 8 in 2023



Plate 2-9 Horticultural land in the footprint of T8 in 2022

2.1.9

Proposed Temporary Construction Compound

The proposed temporary construction compound, located east of Turbine 8, is situated on Improved Agricultural grassland (GA1) adjacent to a hedgerow (WL1) of hawthorn, hazel (*Corylus avellana*), bramble scrub and bracken (*Pteridium aquilinum*).

Table 2-9 Relevé 1 in the footprint of the temporary construction compound

Relevé 1	Grid reference: ITM 538573 743885	Date 20/09/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Holcus lanatus</i>	Yorkshire fog	70
<i>Plantago lanceolata</i>	Ribwort Plantain	20
<i>Ranunculus acris</i>	Meadow buttercup	5
<i>Dactylis glomerata</i>	Cocks foot	25
<i>Lolium perenne</i>	Perennial Rye Grass	15
<i>Ranunculus repens</i>	Creeping buttercup	10
<i>Trifolium pratense</i>	Red clover	2
<i>Cynosurus cristatus</i>	Crested dogs tail	0.5
<i>Taraxacum officinale</i> agg.	Dandelion	5
Fossitt (2000) Habitat Classification		Improved Agricultural Grassland (GA1)
IVC community		GL2C <i>Holcus lanatus</i> - <i>Lolium perenne</i>

Table 2-10 Relevé 2 in the footprint of the temporary construction compound

Relevé 2	Grid reference: ITM 538581 743869	Date 04/07/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Holcus lanatus</i>	Yorkshire fog	70
<i>Alopecurus pratensis</i>	Meadow foxtail	1
<i>Ranunculus acris</i>	Meadow buttercup	5

<i>Dactylis glomerata</i>	Cocks foot	2
<i>Lolium perenne</i>	Perennial Rye Grass	40
<i>Ranunculus repens</i>	Creeping buttercup	3
<i>Trifolium pratense</i>	Red clover	1
<i>Trifolium repens</i>	White clover	2
<i>Cynosurus cristatus</i>	Crested dogs tail	20
<i>Taraxacum officinale agg.</i>	Dandelion	3
<i>Rumex acetosa</i>	Common sorrel	3
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	12
<i>Bellis perennis</i>	Daisy	1
Fossitt (2000) Habitat Classification		Improved Agricultural Grassland (GA1)
IVC community		GL2C <i>Holcus lanatus</i> - <i>Lolium perenne</i>



Plate 2-10 Habitat in the footprint of the temporary construction compound

2.1.10 Met Mast

The proposed met mast is located adjacent to an existing farm track (ED2) at the edge of improved agricultural grassland (GA1).

Table 2-11 Relevé results in the footprint of the proposed met mast

Relevé 1	Grid reference: ITM 536128 743507	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Lolium perenne</i>	Perennial Rye Grass	75
<i>Trifolium repens</i>	White clover	20
<i>Cynosurus cristatus</i>	Crested dogs tail	2
<i>Taraxacum officinale</i> agg.	Dandelion	5
<i>Plantago major</i>	Broadleaved plantain	3
<i>Bellis perennis</i>	Daisy	3
Bare soil		10
Fossitt (2000) Habitat Classification		Improved Agricultural Grassland (GA1)
IVC community		GL3B <i>Lolium perenne</i> - <i>Trifolium repens</i>



Plate 2-11 Improved agricultural grassland in the footprint of the proposed met mast

2.2

Proposed Grid Connection

2.2.1

Proposed Onsite 110kV Substation, Associated Temporary Construction Compound

The proposed onsite 110kV substation and associated temporary construction compound is located within Improved Agricultural grassland surrounded by hedgerows of hawthorn and bramble (*Rubus fruticosus* agg.).

Table 2-12 Relevé within footprint of proposed onsite 110kV substation and construction compound

Relevé 1	Grid reference: ITM 537746 743820	Date 04/07/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Holcus lanatus</i>	Yorkshire fog	30
<i>Trifolium repens</i>	White clover	60
<i>Lolium perenne</i>	Perennial Rye Grass	50
<i>Dactylis glomerata</i>	Cocks foot	5
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	40
<i>Ranunculus repens</i>	Creeping buttercup	5
<i>Rumex acetosa</i>	Common sorrel	1
<i>Cynosurus cristatus</i>	Crested dogs tail	5
<i>Cirsium arvense</i>	Creeping thistle	15
<i>Cerastium fontanum</i>	Mouse ear chickweed	3
Fossitt (2000) Habitat Classification		Improved Agricultural Grassland (GA1)
IVC community		GL3B <i>Lolium perenne</i> - <i>Trifolium repens</i>



Plate 2-12 Receiving habitat in the footprint of the proposed onsite 110kV substation and temporary construction compound

2.2.2

Underground Cabling

The Proposed Grid Connection underground cabling 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

Limestone Pavement and Associated Habitats

The below relevés in
Table 2-13 to

Table 2-15 were taken within the area mapped as Article 17 limestone pavement within the Proposed Wind Farm site. These habitats are outside of the Proposed Project footprint. The relevés indicate that the area consists of a mosaic of bare limestone pavement, dry calcareous heath (HH2) and calcareous grassland (GS1).

Besides those listed in the relevés below, other species recorded within the mapped areas include spring gentian (*Gentiana verna*), wild thyme (*Thymus polytrichous*), wild carrot (*Daucus carota*), lady's bedstraw (*Galium verum*), wall rue (*Asplenium ruta-muraria*), mountain everlasting (*Antennaria dioica*), common milkwort (*Polygala vulgaris*), kidney vetch (*Anthyllis vulneraria*), mouse ear hawkweed (*Pilosella officinarum*), yellow rattle (*Rhinanthus minor*) and the bryophytes *Ctenidium molluscum*, *Neckera crispa* and *Tortella tortuosum*. The westernmost calcareous heath habitat also contains yellow wort (*Blackstonia perfoliata*), squinancywort (*Asperula cynanchica*), bell heather (*Erica cinerea*) and fragrant orchid (*Gymnadenia conopsea*).

Bracken (*Pteridium aquilinum*) was found encroaching much of the large central mapped area as well as common gorse in places.

Table 2-13 Relevé 1 on large, central, Article 17 mapped Limestone Pavement

Relevé 1	Grid reference: ITM 537167 743947	Date 20/09/2022
Species	Common Name	% Cover
Vascular Plants		
<i>Dryas octopetala</i>	Mountain avens	50
<i>Sesleria caerulea</i>	Blue moor grass	40
<i>Leontodon hispidus</i>	Rough hawkbit	20
<i>Molinia caerulea</i>	Purple moor grass	15
<i>Briza media</i>	Quaking grass	10
<i>Lotus corniculatus</i>	Birds foot trefoil	5
<i>Succisa pratensis</i>	Devils Bit Scabious	3
<i>Salix repens</i>	Creeping willow	2
<i>Campanula rotundifolia</i>	Harebell	3
<i>Calluna vulgaris</i>	Ling heather	3
<i>Carlina vulgaris</i>	Carlina thistle	1

<i>Solidago virgaurea</i>	Golden rod	1
Fossitt (2000) Habitat Classification		HH2 Dry calcareous heath
IVC classification		HE1A <i>Dryas octopetala</i> - <i>Sesleria caerulea</i> Annex I habitat: 4060 Alpine and subalpine heath / 4030 Dry heaths

Table 2-14 Relevé 2 on large, central, Article 17 mapped Limestone Pavement

Relevé 2	Grid reference: ITM 537460 743880	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Dryas octopetala</i>	Mountain avens	20
<i>Pteridium aquilinum</i>	Bracken	20
<i>Solidago virgaurea</i>	Golden rod	10
<i>Euphrasia officinalis agg</i>	Eyebright	10
<i>Calluna vulgaris</i>	Ling heather	5
<i>Leucanthemum vulgare</i>	Ox eye daisy	5
<i>Lotus corniculatus</i>	Birds foot trefoil	2
<i>Reseda luteola</i>	Weld	2
<i>Festuca rubra</i>	Red fescue	2
<i>Centaurea nigra</i>	Knapweed	2
<i>Cynosurus cristatus</i>	Crested dogs tail	2
<i>Vicia sativa</i>	Common vetch	1
<i>Succisa pratensis</i>	Devils bit scabious	1
<i>Linum catharticum</i>	Fairy flax	1
Fossitt (2000) Habitat Classification		HH2 Dry calcareous heath

IVC classification	HE1A <i>Dryas octopetala</i> - <i>Sesleria caerulea</i> Annex I habitat: 4060 Alpine and subalpine heath / 4030 Dry heaths
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Table 2-15 Relevé 3 on large, central, Article 17 mapped Limestone Pavement

Relevé 3	Grid reference: ITM 537431 743936	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Campanula rotundifolia</i>	Harebell	40
<i>Achillea millefolium</i>	Yarrow	40
<i>Lotus corniculatus</i>	Birds foot trefoil	20
<i>Solidago virgaurea</i>	Golden rod	10
<i>Prunella vulgaris</i>	Self heal	5
<i>Succisa pratensis</i>	Devils bit scabious	5
<i>Rosa spinosissima</i>	Burnet rose	5
<i>Centaurea nigra</i>	Knapweed	5
<i>Plantago lanceolata</i>	Ribwort plantain	2
<i>Festuca rubra</i>	Red fescue	1
<i>Cerastium fontanum</i>	Mouse ear chickweed	1
<i>Dactylorhiza fuchsii</i>	Common spotted orchid	1
Fossitt (2000) Habitat Classification		GS1 Dry calcareous and neutral grassland
IVC classification	GL3A - <i>Briza media</i> - <i>Thymus polytrichus</i> (transitional) Subcommunity GL3Ai occurs in association with limestone pavement and contains a higher frequency of pavement indicator species than subcommunity GL3Aii.	

	Annex I habitat: Annex I habitat: 4060 Alpine and subalpine heath / 4030 Dry heaths
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Plate 2-13 Exposed calcareous rock (ER2)



Plate 2-14 Limestone pavement relevé 2 17.08.2023



Plate 2-15 Limestone pavement relevé 3 17.08.2023



Plate 2-16 Calcareous heath (HH2) in the vicinity of mapped limestone pavement areas

2.3.2 Calcareous Grassland

Table 2-16 and

Table 2-17 below contain the results of relevés taken on slightly improved dry calcareous grassland adjacent to Article 17 mapped limestone pavement areas in the west of the Proposed Wind Farm site.

Table 2-16 Relevé 1 on dry calcareous/neutral grassland habitat

Relevé 1	Grid reference: ITM 536332 744124	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Plantago lanceolata</i>	Ribwort plantain	30
<i>Lolium perenne</i>	Perennial rye grass	20
<i>Trifolium repens</i>	White clover	15
<i>Ranunculus repens</i>	Creeping buttercup	15

<i>Achillea millefolium</i>	Yarrow	15
<i>Hypochaeris radicata</i>	Cats ear	10
<i>Cynosurus cristatus</i>	Crested dogs tail	5
<i>Ranunculus acris</i>	Meadow buttercup	3
<i>Taraxacum officinale</i> agg.	Dandelion	3
<i>Galium verum</i>	Ladys bedstraw	5
<i>Holcus lanatus</i>	Yorkshire fog	5
<i>Lotus corniculatus</i>	Birds foot trefoil	5
<i>Cirsium arvense</i>	Creeping thistle	5
<i>Trifolium pratense</i>	Red clover	5
<i>Campanula rotundifolia</i>	Harebell	3
<i>Potentilla erecta</i>	Tormentil	2
<i>Pilosella officinarum</i>	Mouse ear hawkweed	2
<i>Cerastium fontanum</i>	Mouse ear chickweed	2
<i>Lathyrus pratensis</i>	Meadow vetchling	2
<i>Senecio jacobaea</i>	Ragwort	1
Non-Vascular Plants		
<i>Pseudoscleropodium purum</i>		3
<i>Rhytidiadelphus squarrosus</i>		20
Fossitt (2000) Habitat Classification		Dry calcareous and neutral grassland (GS1)
IVC classification		GL3D <i>Cynosurus cristatus</i> - <i>Trifolium pratense</i> (transitional) Annex I Habitat affinity: 6210 Orchid-rich calcareous grassland* (20.7%)

Table 2-17 Relevé 2 on dry calcareous/neutral grassland habitat

Relevé 2	Grid reference: ITM 536357 744120	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Trifolium repens</i>	White clover	25
<i>Ranunculus repens</i>	Creeping buttercup	20
<i>Achillea millefolium</i>	Yarrow	20
<i>Hypochaeris radicata</i>	Cats ear	15
<i>Cynosurus cristatus</i>	Crested dogs tail	20
<i>Taraxacum officinale</i> agg.	Dandelion	5
<i>Pimpinella saxifraga</i>	Burnet saxifrage	18
<i>Galium verum</i>	Ladys bedstraw	15
<i>Potentilla erecta</i>	Tormentil	15
<i>Dactylis glomerata</i>	Cocks foot	10
<i>Holcus lanatus</i>	Yorkshire fog	5
<i>Lotus corniculatus</i>	Birds foot trefoil	10
<i>Prunella vulgaris</i>	Self heal	5
<i>Plantago lanceolata</i>	Ribwort plantain	5
<i>Leucanthemum vulgare</i>	Ox eye daisy	5
<i>Festuca rubra</i>	Red fescue	5
<i>Lathyrus pratensis</i>	Meadow vetchling	5
<i>Centaurea nigra</i>	Knapweed	3
<i>Senecio jacobaea</i>	Ragwort	2
<i>Achillea ptarmica</i>	Sneezewort	1
<i>Agrostis stolonifera</i>	Creeping bent	1
Non-Vascular Plants		

<i>Rhytidiadelphus squarrosus</i>		40
Fossitt (2000) Habitat Classification	Dry calcareous and neutral grassland (GS1)	
IVC classification	GL3D <i>Cynosurus cristatus</i> - <i>Trifolium pratense</i> Annex I habitat affinity: 6210 Orchid-rich calcareous grassland* (20.7%)	

Table 2-18 and

Table 2-19 below contain relevés taken on dry calcareous grassland adjacent to the Article 17 mapped limestone pavement areas in the north of the Proposed Wind Farm site.

Table 2-18 Relevé on dry calcareous/neutral grassland to the north of the Proposed Wind Farm site

Relevé 3	Grid reference: ITM 536947 744332	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Centaurea nigra</i>	Knapweed	40
<i>Rumex crispus</i>	Curled dock	20
<i>Euphrasia officinalis agg.</i>	Eyebright	20
<i>Plantago lanceolata</i>	Ribwort plantain	15
<i>Ranunculus repens</i>	Creeping buttercup	20
<i>Leontodon hispidus</i>	Rough hawkbit	10
<i>Ranunculus acris</i>	Meadow buttercup	10
<i>Taraxacum officinale agg.</i>	Dandelion	10
<i>Agrostis stolonifera</i>	Creeping bent	5
<i>Cerastium fontanum</i>	Mouse ear chickweed	5
<i>Prunella vulgaris</i>	Self heal	5
Fossitt (2000) Habitat Classification	Dry calcareous and neutral grassland (GS1)	

IVC classification	GL3C <i>Festuca rubra</i> - <i>Plantago lanceolata</i> (transitional) Annex I habitat affinity: 6210 Orchid-rich calcareous grassland* (19.2%) / 6510 Lowland hay meadows (15.4%)
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Table 2-19 Relevé on dry calcareous/neutral grassland to the north of the Proposed Wind Farm site

Relevé 4	Grid reference: ITM 536916 744404	Date 17/08/2023
Species	Common Name	% Cover
Vascular Plants		
<i>Galium verum</i>	Ladys bedstraw	30
<i>Centaurea nigra</i>	Knapweed	20
<i>Chenopodium majus</i>	Pignut	20
<i>Euphrasia officinalis agg</i>	Eyebright	10
<i>Campanula rotundifolia</i>	Harebell	15
<i>Ranunculus repens</i>	Creeping buttercup	20
<i>Leucanthemum vulgare</i>	Ox eye daisy	10
<i>Trifolium repens</i>	White clover	10
<i>Taraxacum officinale agg.</i>	Dandelion	10
<i>Achillea millefolium</i>	Yarrow	5
<i>Galium aparine</i>	Cleavers	5
<i>Trifolium pratense</i>	Red clover	5
<i>Lotus corniculatus</i>	Birds foot trefoil	2
<i>Persicaria amphibia</i>	Bistort	1
Fossitt (2000) Habitat Classification	Dry calcareous and neutral grassland (GS1)	
IVC classification	DU2C <i>Festuca rubra</i> - <i>Plantago lanceolata</i> - <i>Carex arenaria</i> (Transitional)	



Plate 2-17 Calcareous grassland (Relevé 2)

3.

CONCLUSION

As demonstrated by the relevés recorded and presented in Sections 2.1 to 2.11, habitats within the footprint of the Proposed Project consist of species poor improved agricultural grassland (GA1) of limited conservation value. The following Annex I habitats are present within the Proposed Wind Farm site:

- > Limestone pavements (8240)
- > European dry heaths (4030)
- > Orchid- rich/calcareous grassland (Festuco-Brometalia) (6210)

However, these habitats are outside of the Proposed Project footprint and are completely avoided.

4.

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