



Technical Appendix 5-6 Habitat Condition Assessment Report

EIAR – Volume 3

Muingmore Wind Farm

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Habitat Condition Assessment

Muingmore Wind Farm

RWE Renewables Ireland

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1.0 Overview

Cutover Bog (PB4) and Lowland Blanket Bog (PB3) were recorded within the Proposed Development Site, comprising the Wind Farm footprint (Main Wind Farm Development Site) and the three overrun areas. Full habitat descriptions and mapping are provided in Technical Appendices 5-1 (Technical Habitat Report, Proposed Development Site) and 5-6 (this report) of this EIA. Several areas exhibit physical structure and plant community composition consistent with the Annex I habitat Blanket Bog [7130]. Where hydrological and vegetative functions are intact, this habitat qualifies as a priority habitat under the Habitats Directive.

Importantly, classification as Cutover Bog (PB4) under the Fossitt system does not preclude alignment with Annex I Blanket Bog [7130]. Annex I classification is determined by geomorphology, peat depth, hydrological regime, and characteristic species assemblages, rather than habitat condition alone. Consequently, areas classified as PB4 may still meet Annex I criteria where these defining attributes are present, irrespective of degradation status.

2.0 Methods

The Proposed Development Site was surveyed in accordance with Best Practice Guidance for Habitat Survey and Mapping published by the Heritage Council of Ireland. Habitats were classified using the standard descriptions and codes set out in 'A Guide to Habitat Types in Ireland' (Heritage Council).

Survey work was undertaken in two phases. The Proposed Main Wind Farm Development Site was surveyed by Dr Alex Fitzgerald (refer to Appendix 5-1), while the three overrun areas were surveyed by Dr Andrew Torsney (refer to Appendix 5-6, this report). Habitat extents were mapped using GIS to calculate the area of each habitat type within the Proposed Development Site.

2.1 Proposed Main Wind Farm Development Site Survey Effort

Within the Proposed Main Wind Farm Development Site, approximately 185 hectares of peatland habitat were identified within the site boundary. In accordance with the Integrated Wetland Management (IWM) guidance, a minimum of 16 habitat condition monitoring plots would be required to characterise habitat condition at this scale. However, a total of 28 plots were undertaken to provide a more robust and spatially representative assessment of species composition and habitat condition. This enhanced survey effort reflects the presence of seven discrete locations where direct habitat loss is proposed. Two monitoring plots were located within each area of potential impact, with a further two plots established in the immediate surrounding habitat to provide contextual baseline condition data. This approach allows for a more defensible comparison between impacted and non-impacted areas and strengthens confidence in the assessment of habitat condition and impact significance. Across all areas mapped as PB4 and/or PB3 habitat a series of 2x2 m plots were assessed across the site.

A total of 28 plots were recorded for the Proposed Main Wind Farm Development Site, 14 of which were within the proposed footprint of the development and 14 were outside of the intended footprint. The data was collected between 11th and the 14th of November 2024 by SLR's Technical Director Andrew Torsney in accordance with the Irish Wildlife Manual No



128¹ and No.79². For the Proposed Main Windfarm Site, the twenty-eight monitoring stops were selected ensuring they were well dispersed across the site (Figure 3-1).

2.2 Overrun Areas Survey Effort

The overrun areas had roughly 14.7 ha of peatland habitats identified – therefore, only 4 quadrats were required. Overrun area 1 had 4 quadrats undertaken and we undertook 8 quadrats at overrun area 3. It was decided to do 8 at the overrun area 3 because the location has been previously mapped as a favourable reference area (FRF) in the Article 17 mapping data. As there were no Annex I peatlands at overrun area 2 no condition assessment was necessary. Across all areas mapped as PB4 and/or PB3 habitat a series of 2x2 m plots were assessed across the site.

The overrun area data was collected between 7th and the 8th of January 2026 by SLR's Technical Director Andrew Torsney in accordance with the Irish Wildlife Manual No 128³ and No.79⁴. It is important to note that no PB4 or PB3 habitat was recorded in overrun area 2 – therefore no condition assessment was required. The twelve monitoring stops recorded in overrun areas 1 and 3 were dispersed across the sites (Figure 5-2 and Figure 5-3).

2.3 Condition Assessment Methods

At each of these monitoring stops a 2x2 m quadrat was set and all species within were identified using vegetative identification techniques. Plant species nomenclature follows Stace 4 and the percentage cover of each species was identified. Moreover, the criteria were assessed at each quadrat as well as a 20m radius around the monitoring stops according to the relevant IWM assessment methods. For all quadrats the Annex I habitat Blanket bogs (* if active bog) [7130] condition assessment criteria were recorded.

In addition to the above – for the Proposed Main Wind Farm Development Site – a condition assessment was undertaken followed the DEFRA metric. Furthermore, it was noted that at this site the community composition of the vegetation aligned more closely with a mosaic of Northern Atlantic wet heaths with *Erica tetralix* [4010] and European dry heaths [4030] (despite the deep peat substrate). Therefore, as a precaution we recorded the condition assessment for these two habitats also. These are not presented in this report as they are not deemed necessary for the purposes of the assessment – the goal is to provide a 35-year habitat management plan to achieve good status of Blanket Bog habitat which has a higher ecological value and is more appropriate for deep peat.

Further consideration was given to possible occurrences of rare or legally protected plant species (as listed in Flora Protection Order 1999) or Red-listed plant species (Curtis & McGough 1998⁵, Wyse Jackson et al. 2016⁶).

¹ 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.

² 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.

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.

⁴ 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.

⁵ Curtis, T.G.F. & McGough, H.N. (1988) The Irish Red Data Book. 1 Vascular Plants. Stationery Office, Dublin.

⁶ Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016) Ireland Red List No. 10: Vascular Plants. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland.



Regarding the condition assessment – once the data is recorded the assessment of condition is undertaken based on the pass-fail rates for each of the criteria. Monitoring stops with no failed criteria automatically pass at the stop level. When monitoring stops have failed one or more criteria expert judgement of the ecological condition of those stops may be employed to reassess whether any of those stops might legitimately be permitted to pass, for example if there has been a marginal failure of a single criterion. All other stops are deemed to have failed. In general, it is understood that 4 or more fails is an overall failure of the monitoring stop. At a site level the structure and function of the habitat is assessed regarding Table 2.1.

Table 2.1 Determining site level results for structure and function as per the IWM

Conservation Status	Favourable Good (green)	Unfavourable Inadequate (amber)	Unfavourable Bad (red)
Criteria	No stops fail	1-25% of stops fail	> 25% of stops fail

2.4 Limitations

The survey was conducted in the sub optimal period. However, vegetative identification was used, meaning the flowering heads were not needed to record the species. All species found on site were identified. Cryptic species such as orchids, which would be sub-terrestrial in this period, were not possible to ID. Overall this is not identified to be a significant limitation, but it does hinder the reliability of the data slightly – this was considered throughout the assessment process.

3.0 Proposed Main Wind Farm Development Site Results

In general, the Proposed Main Wind Farm Development Site is of generally consistent community composition with some patches of obvious pine encroachment from the surrounding woodland, but beyond the scrub encroachment there is no spatial variation to note. A total of 46 species were identified across the site at various levels of percentage cover within each quadrat (as can be seen in Appendix A, Table 3.2 and Table 3.3).

Each quadrat was identified to have a good level of within plot diversity, with the data generally ranging from 0.61-0.88; however, there is one quadrat which has Simpsons index reported at 0.44 (Figure 3-1). However, despite this diversity the overall species composition and condition did not align with good habitat condition.

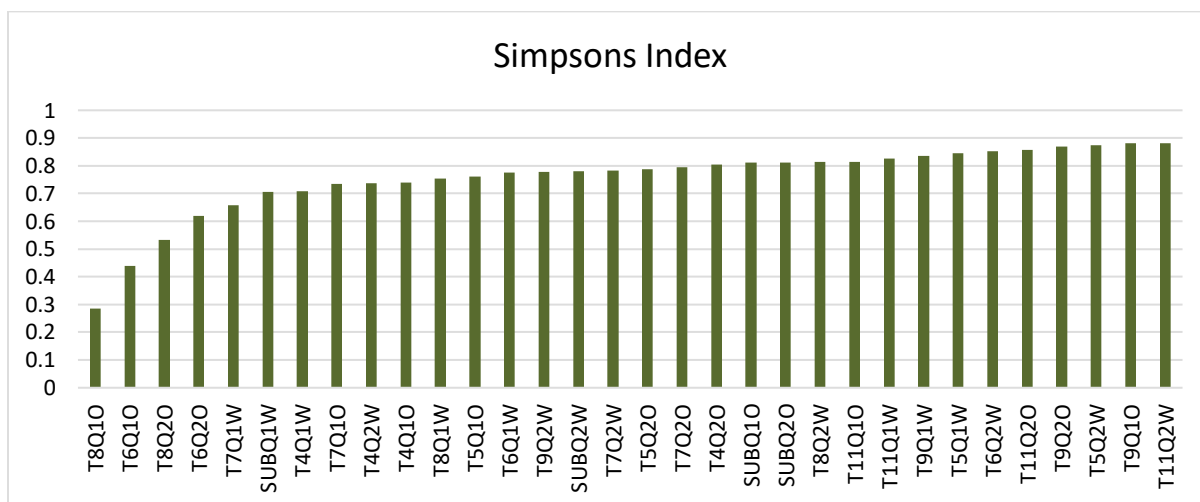


Figure 3-1 Simpsons index for each quadrat showing a range from 0.44 to 0.88



The habitats on site were mapped (Figure 3-3). However, due to accessibility some of the areas had to be identified from a distance, which precluded the ability to conduct a complete condition assessment. The areas used for the condition assessment can be found in Figure 3-4. It is important to note that the full extent of each habitat as mapped in the full habitat map will be used for any BNG assessments following a worst-case scenario approach assuming these areas to be consistent with the condition of the highest rated parcel of land.

In general, the habitats identified on site were of low to moderate condition. This is because the site is extensively drained, with high instances of scrub encroachment prevalent throughout, and invasive species such as Rhododendron and Prickly Heath present throughout the site. The areas where moderate habitat condition was identified were due to a higher abundance of Sphagnum that in other areas, as can be seen in Table 3.2 – and Appendix B.

Table 3.1 Habitat condition assessment results as per the UK habitats process for each of the locations in Figure 3-2 – full details are in Appendix B

Condition Area	Condition Index Value	Passes
Location 1	<i>Moderate (2)</i>	<i>3 Core, 1 Additional</i>
Location 2	<i>Low (1)</i>	<i>3 Core Only</i>
Location 3	<i>Low (1)</i>	<i>3 Core Only</i>
Location 4	<i>Low (1)</i>	<i>3 Core Only</i>
Location 5	<i>Moderate (2)</i>	<i>3 Core, 1 Additional</i>
Location 6	<i>Moderate (2)</i>	<i>3 Core, 1 Additional</i>
Location 7	<i>Low (1)</i>	<i>3 Core Only</i>
Location 8	<i>Moderate (2)</i>	<i>3 Core, 1 Additional</i>

As expected, none of the monitoring stops passed the criteria for Blanket Bog [7130]. See Appendix C full details.

4.0 Overrun Areas Site 1 Results

This habitat is assessed as Favourable condition. Vegetation composition and structure are consistent with Annex I blanket bog, with a well-developed hummock–hollow microtopography and a characteristic assemblage of bog indicator species. Sphagnum mosses are frequent (up to c.30% cover, highest in the south), supporting active peat-forming processes. Although overall cover remains below the ≥40% threshold required to qualify as priority active peatland.

Hydrological condition is broadly intact: drainage features are shallow, discontinuous and largely infilled by Sphagnum, indicating limited functional impact, despite the site appearing drier than expected in winter, particularly toward the north. Lichen diversity is notable and there is limited evidence of severe degradation. Areas of standing water with near-complete Sphagnum cover in the southern extent are interpreted as re-vegetated, likely anthropogenic pools and have been mapped separately to reflect their wetter character.

Condition scoring under the DEFRA metric indicates Good (3) condition - 5 Core and 1 additional criterion. All monitoring stops pass the IWM blanket bog criteria. Overall, the habitat is in favourable ecological condition and, while not currently qualifying as priority active blanket bog, it is considered close to that threshold and retains clear potential for restoration through enhanced water retention and further Sphagnum development.

5.0 Overrun Areas Site 3 Results

This area is assessed as Unfavourable - Bad (current condition) based on field evidence. The habitat has been subject to recent and extensive anthropogenic disturbance, including



rotavation and levelling, resulting in widespread exposure of bare peat (c.70%), loss of peatland vegetation structure, absence of Sphagnum, and a disrupted hydrological regime characterised by deep perimeter drains and internal scars. Vegetation present is indicative of early recolonisation and secondary succession, dominated by rushes and competitive grasses, with community composition aligning more closely with wet grassland on deep peat than functioning blanket bog. Both IWM and DEFRA condition assessments fail across all relevant criteria, confirming severe degradation and very low current ecological functionality as blanket bog.

For biodiversity accounting purposes only, the habitat is treated as Favourable / Good based on its designation as an Article 17 Favourable Reference Area for blanket bog. This does not reflect the present ecological state.



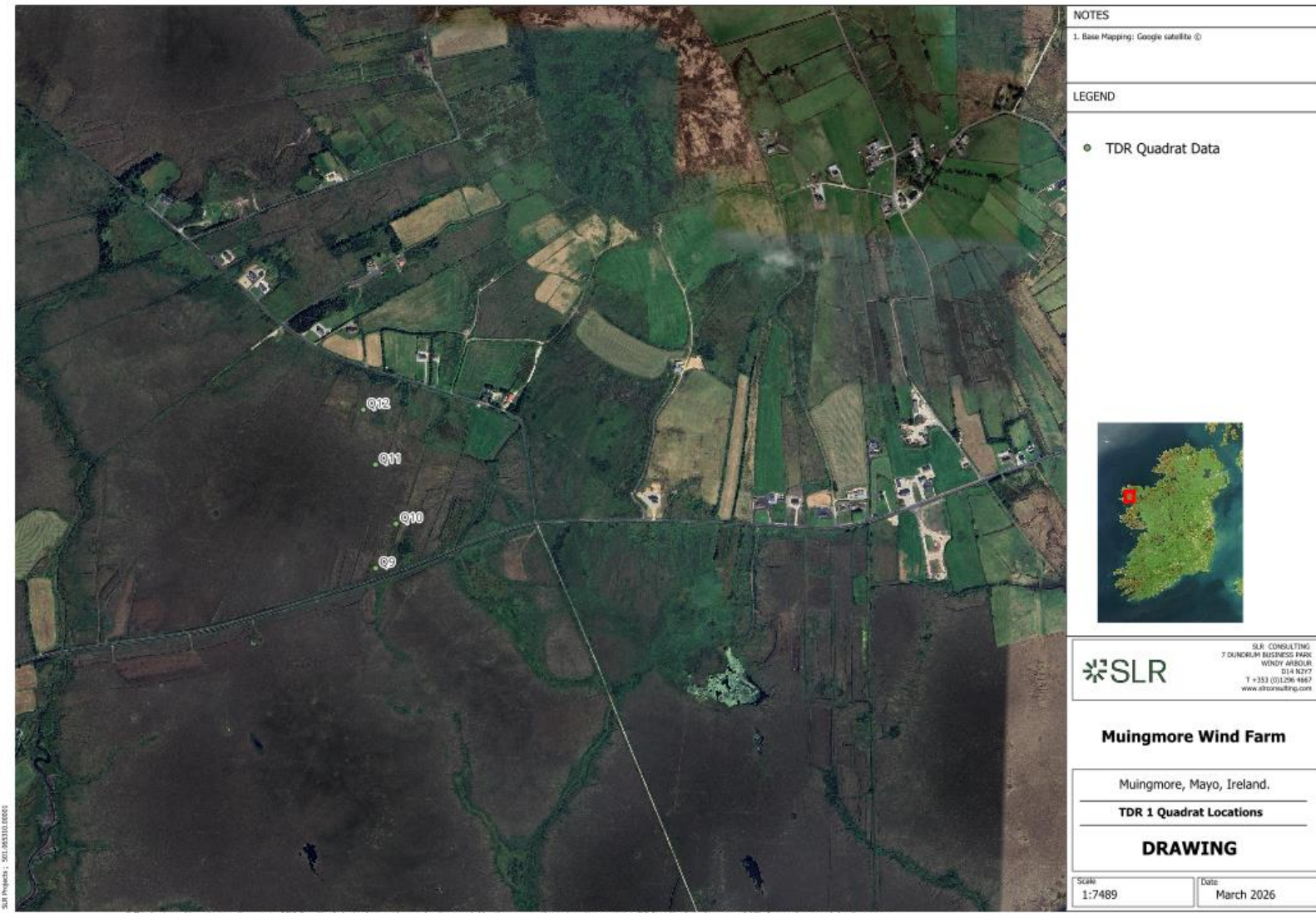


Figure 5-2 Layout of Quadrats at TDR 1





Figure 5-3 Layout of Quadrats at TDR 3





Figure 5-4 Peatland Habitat Map for the Main Windfarm Site



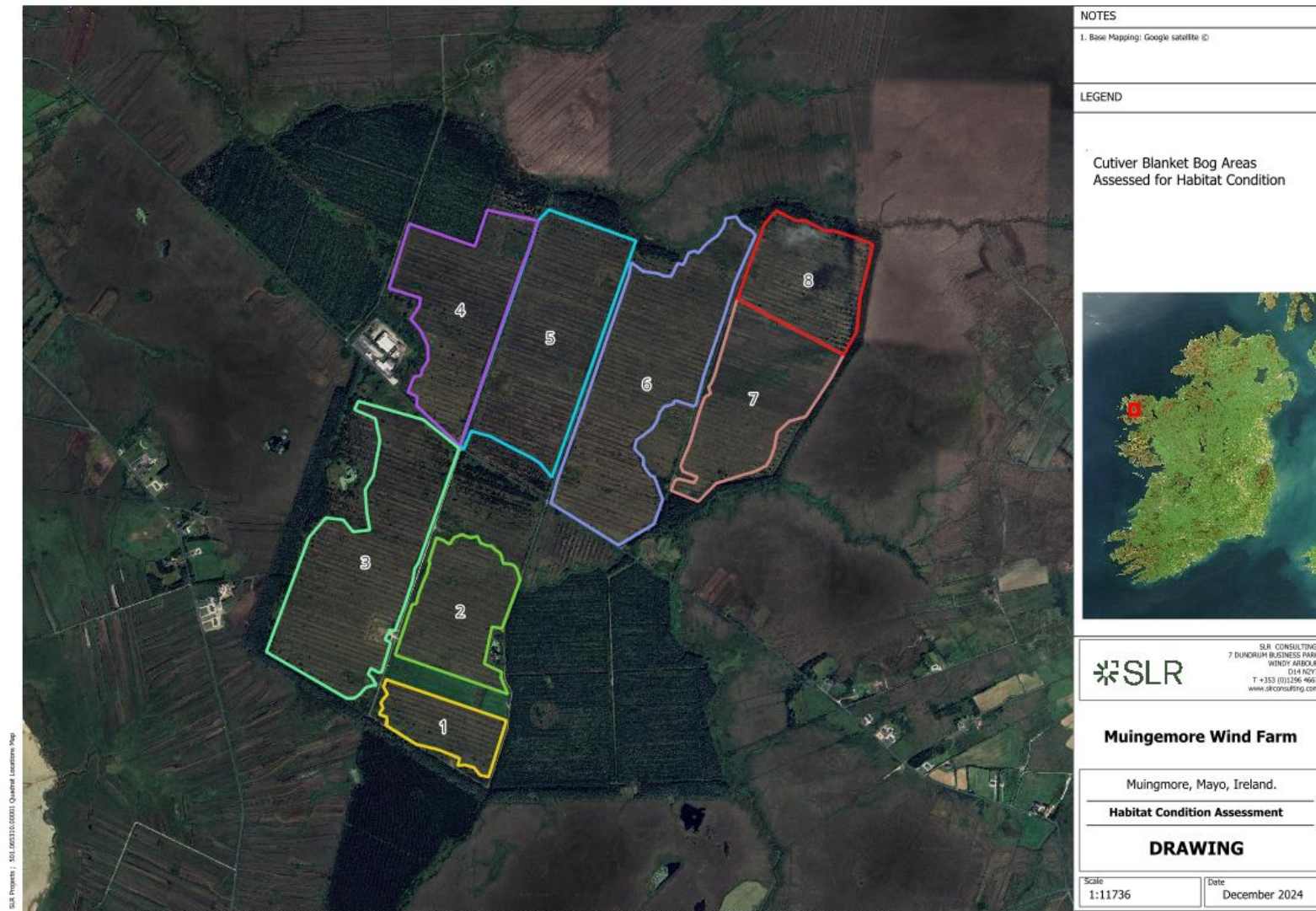


Figure 5-5 Areas of cutover lowland blanket bog assessed for habitat condition



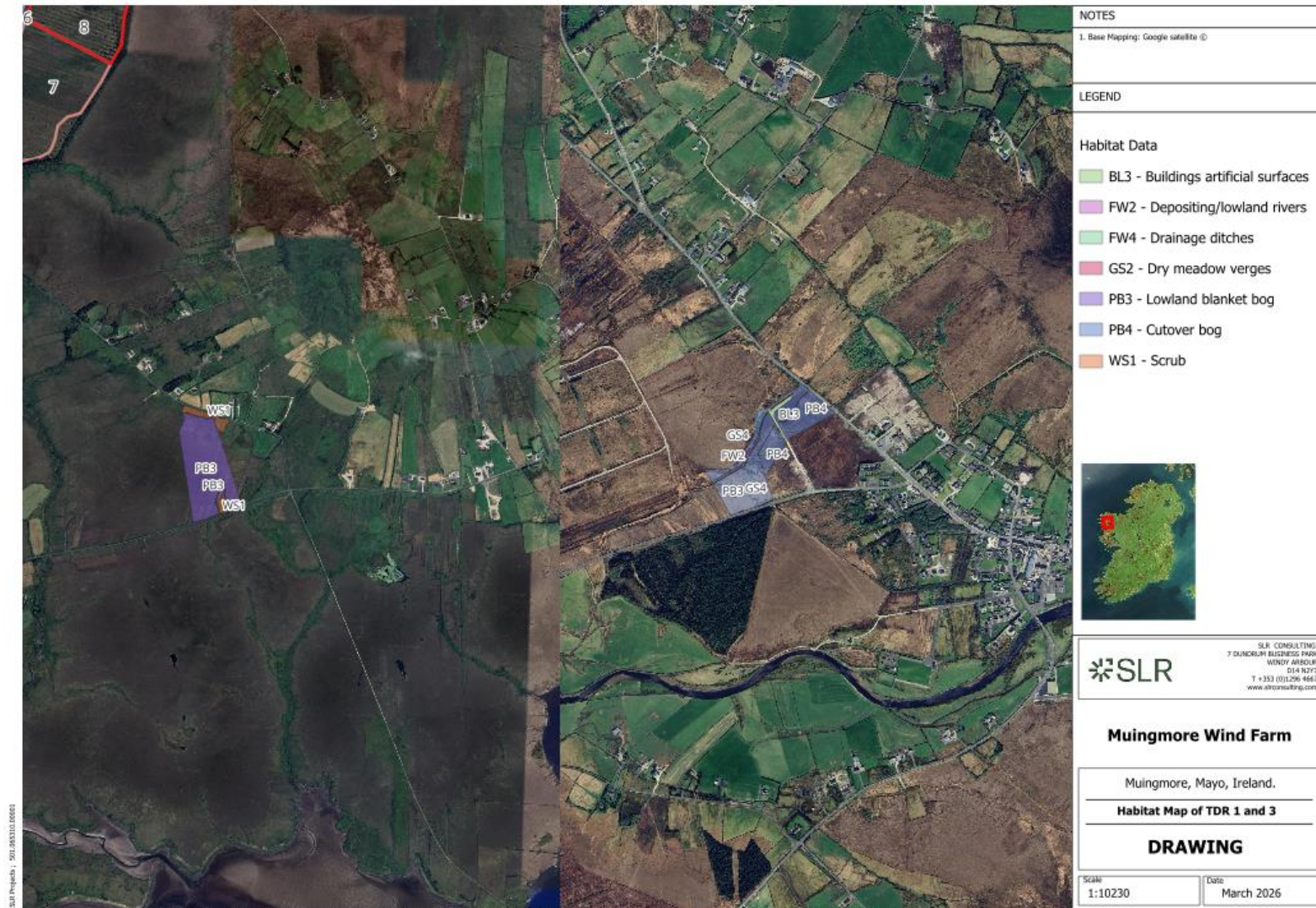


Figure 5-4 Peatland Habitat Map for TDR 1 and TDR 3



6.0 Conclusion

The habitats recorded across the Proposed Development Site comprise blanket bog (PB3) and cutover bog (PB4), corresponding to Annex I Lowland Blanket Bog [7130]. No areas meet the criteria for priority active blanket bog, as Sphagnum cover remains below the $\geq 40\%$ threshold required to demonstrate sustained active peat formation.

Current habitat condition across much of the site is constrained by historic and ongoing anthropogenic pressures, most notably extensive artificial drainage, scrub and woodland encroachment, and the widespread presence of invasive non-native species, particularly *Rhododendron ponticum*. These pressures have resulted in disrupted hydrological function, altered vegetation structure, and reduced peatland integrity, such that large areas fail to meet condition criteria for favourable blanket bog despite moderate within-plot species diversity.

Notwithstanding this, peat depth remains substantial across the Proposed Development Site and remnants of characteristic blanket bog communities persist, particularly where Sphagnum is locally frequent and drainage features are partially infilled. This indicates that the site retains high restoration potential. Targeted measures focused on hydrological restoration, scrub and invasive species control, and the promotion of Sphagnum recovery are likely to deliver substantial ecological gains. With appropriate management intervention, improvement to Good (3) condition is considered achievable, though this should not be assumed to occur rapidly or uniformly across the site.

Overall, the Proposed Development Site represents a degraded but recoverable peatland system, where current condition reflects management history rather than inherent ecological limitation.





Appendix A Plot data – Species Composition and Habitat Classification

Muingmore Windfarm

RWE Renewables Ireland

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SLR Project No.: 501.V00727.00008

Species list and relative composition of each quadrat – part 1 of 4

Species (Scientific Name)	T11-Q1W	T11-Q2W	T11-Q1O	T11-Q2O	SUB-Q1W	SUB-Q2W	SUB-Q1O	SUB-Q2O	T4-Q1W	T4-Q2W	T4-Q1O	T4-Q2O
Golden-head Moss (<i>Breutelia chrysocoma</i>)	12	5	3	2	15	8	12	4	5	0	4	0
Heather* (<i>Calluna vulgaris</i>)	65	35	55	18	75	50	60	60	8	6	5	30
Sedges (<i>Carex</i> spp.)	2	30	8	2	8	15	15	18	75	5	3	20
Cross-leaved heath (<i>Erica tetralix</i>)	5	1	5	3	1	0	0	0	0	0	0	3
Common Cottongrass (<i>Eriophorum angustifolium</i>)	20	18	8	30	2	3	2	0	3	0	10	40
Bog-myrtle (<i>Myrica gale</i>)	2	12	0	0	0	0	0	0	0	0	4	0
Bog Asphodel (<i>Narthecium ossifragum</i>)	2	0	0	0	0	0	0	0	0	0	0	0
Non-crustose lichens (Noncrustose lichens)	0	3	3	5	4	2	4	15	21	0	1	0
Lousewort (<i>Pedicularis sylvatica</i>)	0	0	0	0	0	0	0	0	0	5	0	0
Heath Milkwort (<i>Polygala serpyllifolia</i>)	0	0	1	0	0	2	0	2	0	1	2	3
Tormentil (<i>Potentilla erecta</i>)	0	0	0	0	2	2	2	1	3	1	1	2
Black Bog-rush (<i>Schoenus nigricans</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Sphagnum Moss (<i>Sphagnum</i> spp.)	20	4	22	22	8	11	25	5	3	25	70	40
Devil's-bit Scabious (<i>Succisa pratensis</i>)	0	1	0	0	0	0	0	0	0	0	0	0
Deergrass (<i>Trichophorum germanicum</i>)	0	0	0	0	0	0	4	2	0	12	2	0
Bearberry (<i>Arctostaphylos uvaursi</i>)	20	5	6	30	2	1	0	0	0	0	2	0
Bristly Swan-neck Moss (<i>Campylopus atrovirens</i>)	0	1	0	0	0	0	0	0	0	0	0	0
Soft Rush (<i>Juncus effusus</i>)	20	15	50	20	20	5	35	20	2	76	75	0
Pine sp.	5	0	3	0	0	0	0	0	0	0	0	0
Ragwort (<i>Jacobaea vulgaris</i>)	3	1	2	0	0	0	0	0	0	0	0	0
Hard Fern (<i>Blechnum spicant</i>)	1	1	0	0	5	2	2	3	3	0	5	0
Autumn hawkbit (<i>Scorzoneroides autumnalis</i>)	5	2	4	2	2	5	5	4	3	17	10	2
Bog pimpernel (<i>Anagallis tenella</i>)	1	0	0	0	0	0	0	0	0	0	0	0
Creeping buttercup (<i>Ranunculus repens</i>)	2	2	2	4	4	3	3	4	3	2	4	3
Blue sedge (<i>Carex flacca</i>)	0	30	6	0	0	3	3	12	0	0	0	0



Species (Scientific Name)	T11-Q1W	T11-Q2W	T11-Q10	T11-Q20	SUB-Q1W	SUB-Q2W	SUB-Q10	SUB-Q20	T4-Q1W	T4-Q2W	T4-Q10	T4-Q20
Marsh hair moss (<i>Polytrichum commune</i>)	0	2	0	0	0	0	0	0	0	0	0	0
Other moss	0	11	2	0	0	0	0	0	0	0	0	0
Soft Shield Fern (<i>Polystichum setiferum</i>)	0	0	2	2	0	0	0	0	0	6	0	0
Poa sp.	0	1	2	3	0	0	0	0	0	0	0	0
Fescue (<i>Festuca rubra</i>)	2	2	0	5	0	4	4	3	0	0	2	12
Prickly Heath (<i>Gaultheria mucronata</i>)	0	0	0	0	0	1	1	8	0	0	0	0
Great wood-rush (<i>Luzula sylvatica</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Yorkshire fog (<i>Holcus lanatus</i>)	0	0	0	0	0	0	0	0	0	0	3	0
Cocksfoot (<i>Dactylis glomeratus</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Heath Bedstraw (<i>Galium saxatile</i>)	0	0	0	0	0	0	0	0	0	0	1	0
Bare Gound	0	0	0	0	0	0	0	0	0	0	0	0
Purple Moore Grass (<i>Molinia caerulea</i>)	0	0	0	0	0	0	0	0	2	0	0	0
False oatgrass (<i>Arrhenatherum elatius</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Thistle sp.	0	0	0	0	0	0	0	0	0	0	0	0
Field Wood-rush (<i>Luzula campestris</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Common Sedge (<i>Carex Nigra</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Field sorrel (<i>Rumex acetosella</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Crested hair-grass (<i>Koeleria macrantha</i>)	0	0	0	0	0	0	0	0	0	0	0	0
White clover (<i>Trifolium ripens</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Brambles (<i>Rubus fruticosus</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Rhododendron (<i>Rhododendron ponteticum</i>)	0	0	0	0	0	0	0	0	13	7	0	0



Species list and relative composition of each quadrat – part 2 of 4

Species (Scientific Name)	T5-Q1W	T5-Q2W	T5-Q1O	T5-Q2O	T6-Q1W	T6-Q2W	T6-Q1O	T6-Q2O	T7-Q1W	T7-Q2W	T7-Q1O	T7-Q2O
Golden-head Moss (<i>Breutelia chrysocoma</i>)	2	20	5	35	0	0	1	11	90	40	3	16
Heather* (<i>Calluna vulgaris</i>)	45	25	30	12	8	28	5	4	0	18	50	50
Sedges (<i>Carex</i> spp.)	11	11	12	2	4	9	11	3	0	3	2	2
Cross-leaved heath (<i>Erica tetralix</i>)	4	12	7	0	1	3	2	1	0	0	2	1
Common Cottongrass (<i>Eriophorum angustifolium</i>)	11	6	0	0	4	0	0	0	0	0	0	0
Bog-myrtle (<i>Myrica gale</i>)	0	0	0	0	0	0	5	5	0	0	0	0
Bog Asphodel (<i>Narthecium ossifragum</i>)	0	0	0	0	2	1	0	0	0	0	0	0
Non-crustose lichens (Noncrustose lichens)	2	2	4	3	60	8	0	0	3	3	5	2
Lousewort (<i>Pedicularis sylvatica</i>)	0	0	0	0	2	1	0	0	0	0	1	1
Heath Milkwort (<i>Polygala serpyllifolia</i>)	1	1	0	2	1	1	3	2	0	2	2	2
Tormentil (<i>Potentilla erecta</i>)	0	2	1	2	1	1	3	2	0	1	1	2
Black Bog-rush (<i>Schoenus nigricans</i>)	0	0	0	0	11	12	0	0	0	0	0	0
Sphagnum Moss (<i>Sphagnum</i> spp.)	28	25	65	85	8	16	0	0	10	45	55	45
Devil's-bit Scabious (<i>Succisa pratensis</i>)	0	0	0	0	0	0	1	1	0	0	0	0
Deergrass (<i>Trichophorum germanicum</i>)	0	0	0	0	10	30	0	15	0	0	0	0
Bearberry (<i>Arctostaphylos uvaursi</i>)	16	2	4	7	0	2	0	0	1	2	0	0
Bristly Swan-neck Moss (<i>Campylopus atrovirens</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Soft Rush (<i>Juncus effusus</i>)	3	1	0	60	0	0	0	0	100	75	3	12
Pine sp.	1	0	2	1	0	0	0	0	0	8	0	0
Ragwort (<i>Jacobaea vulgaris</i>)	0	0	0	0	1	1	0	0	0	1	0	0
Hard Fern (<i>Blechnum spicant</i>)	5	5	1	16	0	0	0	0	0	1	0	2
Autumn hawkbit (<i>Scorzoneroides autumnalis</i>)	2	3	3	4	0	0	0	0	3	3	2	2
Bog pimpernel (<i>Anagallis tenella</i>)	0	1	0	0	0	0	0	0	0	0	0	0
Creeping buttercup (<i>Ranunculus repens</i>)	2	2	2	2	2	2	2	2	1	2	2	2
Blue sedge (<i>Carex flacca</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Marsh hair moss (<i>Polytrichum commune</i>)	0	0	0	0	0	0	0	0	0	0	0	0



Species (Scientific Name)	T5-Q1W	T5-Q2W	T5-Q10	T5-Q20	T6-Q1W	T6-Q2W	T6-Q10	T6-Q20	T7-Q1W	T7-Q2W	T7-Q10	T7-Q20
Other moss	0	0	0	0	0	0	0	0	0	0	0	0
Soft Shield Fern (<i>Polystichum setiferum</i>)	1	0	0	4	0	0	2	0	10	2	0	0
Poa sp.	0	0	0	0	0	0	0	0	0	0	0	0
Fescue (<i>Festuca rubra</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Prickly Heath (<i>Gaultheria mucronata</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Great wood-rush (<i>Luzula sylvatica</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Yorkshire fog (<i>Holcus lanatus</i>)	0	0	0	0	0	0	0	0	2	0	0	0
Cocksfoot (<i>Dactylis glomeratus</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Heath Bedstraw (<i>Galium saxatile</i>)	0	0	0	1	0	0	0	0	2	0	0	0
Bare Gound	0	0	0	0	15	6	0	12	0	0	0	0
Purple Moore Grass (<i>Molinia caerulea</i>)	30	16	20	4	8	4	100	85	3	6	25	45
False oatgrass (<i>Arrhenatherum elatius</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Thistle sp.	0	0	0	0	0	0	0	0	0	0	0	0
Field Wood-rush (<i>Luzula campestris</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Common Sedge(<i>Carex Nigra</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Field sorrel (<i>Rumex acetosella</i>)	0	0	0	0	0	0	0	0	2	0	0	0
Crested hair-grass (<i>Koeleria macrantha</i>)	0	0	0	0	0	0	0	0	0	0	0	0
White clover (<i>Trifolium ripens</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Brambles (<i>Rubus fruticosus</i>)	0	0	0	3	0	0	0	0	5	0	0	0
Rhododendron (<i>Rhododendron ponteticum</i>)	2	0	0	0	0	0	0	0	0	0	0	0



Species list and relative composition of each quadrat – part 3 of 4

Species (Scientific Name)	T8-Q1W	T8-Q2W	T8-Q1O	T8-Q2O	T9-Q1W	T9-Q2W	T9-Q1O	T9-Q2O
Golden-head Moss (<i>Breutelia chrysocoma</i>)	10	2	0	0	18	12	25	11
Heather* (<i>Calluna vulgaris</i>)	0	0	0	0	28	6	35	21
Sedges (<i>Carex</i> spp.)	3	2	0	0	8	70	22	5
Cross-leaved heath (<i>Erica tetralix</i>)	0	0	0	0	0	0	0	0
Common Cottongrass (<i>Eriophorum angustifolium</i>)	0	0	0	0	0	0	22	25
Bog-myrtle (<i>Myrica gale</i>)	0	0	0	0	0	0	0	0
Bog Asphodel (<i>Narthecium ossifragum</i>)	0	0	0	0	0	0	0	0
Non-crustose lichens (Noncrustose lichens)	1	2	0	0	5	3	3	4
Lousewort (<i>Pedicularis sylvatica</i>)	0	0	0	0	0	0	0	0
Heath Milkwort (<i>Polygala serpyllifolia</i>)	2	0	0	0	0	0	0	0
Tormentil (<i>Potentilla erecta</i>)	0	0	0	0	0	0	2	2
Black Bog-rush (<i>Schoenus nigricans</i>)	0	0	0	0	0	0	0	0
Sphagnum Moss (<i>Sphagnum</i> spp.)	0	8	0	0	75	3	3	12
Devil's-bit Scabious (<i>Succisa pratensis</i>)	0	0	0	0	0	0	0	0
Deergrass (<i>Trichophorum germanicum</i>)	0	0	0	0	0	17	2	6
Bearberry (<i>Arctostaphylos uvaursi</i>)	0	0	0	0	1	0	0	0
Bristly Swan-neck Moss (<i>Campylopus atrovirens</i>)	0	0	0	0	0	0	0	0
Soft Rush (<i>Juncus effusus</i>)	20	50	100	100	55	1	25	2
Pine sp.	0	0	0	0	0	0	0	0
Ragwort (<i>Jacobaea vulgaris</i>)	0	0	0	0	0	0	0	0
Hard Fern (<i>Blechnum spicant</i>)	0	0	4	0	0	0	1	2
Autumn hawkbit (<i>Scorzoneroides autumnalis</i>)	2	5	0	0	7	4	4	5
Bog pimpernel (<i>Anagallis tenella</i>)	0	0	0	0	0	5	0	0
Creeping buttercup (<i>Ranunculus repens</i>)	2	2	0	7	3	2	1	2
Blue sedge (<i>Carex flacca</i>)	0	0	0	0	8	70	21	3
Marsh hair moss (<i>Polytrichum commune</i>)	0	0	0	0	0	0	2	0



Species (Scientific Name)	T8-Q1W	T8-Q2W	T8-Q10	T8-Q20	T9-Q1W	T9-Q2W	T9-Q10	T9-Q20
Other moss	0	0	0	0	0	0	0	0
Soft Shield Fern (<i>Polystichum setiferum</i>)	0	0	0	0	0	0	0	0
Poa sp.	70	30	2	0	0	0	0	0
Fescue (<i>Festuca rubra</i>)	12	15	0	0	40	20	18	2
Prickly Heath (<i>Gaultheria mucronata</i>)	0	0	0	0	0	0	0	0
Great wood-rush (<i>Luzula sylvatica</i>)	2	2	0	0	11	0	0	0
Yorkshire fog (<i>Holcus lanatus</i>)	2	2	0	7	3	2	1	2
Cocksfoot (<i>Dactylis glomeratus</i>)	1	0	0	0	0	0	0	0
Heath Bedstraw (<i>Galium saxatile</i>)	0	0	0	0	0	0	0	0
Bare Gound	0	0	0	0	0	0	0	0
Purple Moore Grass (<i>Molinia caerulea</i>)	0	0	0	0	0	0	0	0
False oatgrass (<i>Arrhenatherum elatius</i>)	0	0	0	0	6	0	0	2
Thistle sp.	1	0	0	0	0	2	0	0
Field Wood-rush (<i>Luzula campestris</i>)	0	0	0	0	0	3	0	0
Common Sedge (<i>Carex Nigra</i>)	0	0	0	0	0	0	2	0
Field sorrel (<i>Rumex acetosella</i>)	2	3	6	2	0	0	0	0
Crested hair-grass (<i>Koeleria macrantha</i>)	6	2	0	0	0	0	0	0
White clover (<i>Trifolium ripens</i>)	20	3	0	0	0	0	0	0
Brambles (<i>Rubus fruticosus</i>)	0	30	7	45	0	0	0	0
Rhododendron (<i>Rhododendron ponteticum</i>)	0	0	0	0	0	0	0	0



Species list and relative composition of each quadrat – part 4 of 4 (overrun area 1 and 3)

Species (Scientific Name)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Bog rosemary (<i>Andromeda polifolia</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Golden-headed moss (<i>Breutelia chrysocoma</i>)	0	0	0	0	0	0	0	7	10	10	3	4
Heather / Ling (<i>Calluna vulgaris</i>)	0	2	0	0	0	0	0	20	40	20	20	30
Bigelow's sedge (<i>Carex bigelowii</i>)	0	0	0	0	0	0	0	0	0	0	2	0
White earwort (<i>Diplophyllum albicans</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Sundews (count separately) (<i>Drosera</i> spp.)	0	0	0	0	0	0	0	0	0	0	0	0
Crowberry (<i>Empetrum nigrum</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Cross-leaved heath (<i>Erica tetralix</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Common cottongrass (<i>Eriophorum angustifolium</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Hare's-tail cottongrass (<i>Eriophorum vaginatum</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Bogbean (<i>Menyanthes trifoliata</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Bog myrtle / Sweet gale (<i>Myrica gale</i>)	0	0	0	0	0	0	0	0	0	20	2	0
Bog asphodel (<i>Narthecium ossifragum</i>)	0	0	0	0	0	0	1	1	0	1	1	0
Various leafy/shrubby lichens (Non-crustose lichens)	0	0	0	0	0	0	0	20	20	25	40	60
Bog notchwort (<i>Odontoschisma sphagni</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Lousewort (<i>Pedicularis sylvatica</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Pale butterwort (<i>Pinguicula lusitanica</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Purple pouchwort (<i>Pleurozia purpurea</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Heath milkwort (<i>Polygala serpyllifolia</i>)	0	0	0	0	5	5	5	7	1	2	0	0
Woolly fringe-moss (<i>Racomitrium lanuginosum</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Beak-sedges (count separately) (<i>Rhynchospora</i> spp.)	0	0	0	0	0	0	0	0	0	0	0	0
Slender earwort (<i>Scapania gracilis</i>)	0	0	0	6	0	0	6	0	0	0	0	0
Black bog-rush (<i>Schoenus nigricans</i>)	0	0	0	0	0	0	2	3	4	4	4	2
Bog mosses (count separately) (<i>Sphagnum</i> spp. (excl. <i>S. fallax</i>))	0	0	0	0	0	0	0	0	20	30	5	0



Species (Scientific Name)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Deergrass (<i>Trichophorum germanicum</i>)	0	2	30	35	10	15	20	20	3	40	30	25
Bilberry (<i>Vaccinium myrtillus</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Hard rush (<i>Juncus inflexus</i>)	0	0	0	0	80	70	30	0	0	0	0	0
Soft rush (<i>Juncus effusus</i>)	1	2	1	4	6	3	20	15	20	2	2	3
Yorkshire fog (<i>Holcus lanatus</i>)	2	0	0	0	20	20	18	0	0	0	0	0
Bare ground - Non indicator (Bare ground - Non indicator)	90	90	70	65	0	3	50	60	0	0	7	7
Sparse dead veg (Sparse dead veg)	8	8	4	6	0	2	4	5	0	0	0	0
Glaucous sedge (<i>Carex flacca</i>)	0	1	2	0	0	0	4	2	4	0	0	0
Creeping buttercup (<i>Ranunculus repens</i>)	0	0	0	0	3	3	4	2	0	0	0	0
Poa sp (<i>Poa</i> sp)	0	0	0	0	2	10	2	0	0	0	0	0
Bittercress sp (<i>Cardamine</i> sp)	0	0	0	0	0	2	5	0	0	0	0	0
Lesser burdock (<i>Arctium minus</i>)	0	0	0	0	0	0	4	0	0	0	0	0
Purple mooregrass (<i>Molinia caerulea</i>)	0	0	0	0	0	0	0	0	40	2	12	10
Bog moss (<i>Sphagnum fallax</i>)	0	0	0	0	0	0	0	0	10	5	5	0



Habitat Classification matrix of each quadrat relative to Fossit the Irish Vegetation Classification and the IWM Cutover Raised Bog Classification systems

Quadrat	IVC Code	IVC Category	Sphagnum Level	IWM Cutover Habitat Type Code	IWM Cutover Habitat Type Category	Fossit Code
T11-Q1W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog
T11-Q2W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T11-Q1O	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog
T11-Q2O	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog
SUB-Q1W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
SUB-Q2W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog
SUB-Q1O	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog
SUB-Q2O	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T4-Q1W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T4-Q2W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog
T4-Q1O	BG2E	Calluna vulgaris–Eriophorum spp. bog	High Sphagnum	HS1	Sphagnum subnitens - Erica tetralix	PB4 - Cutover Bog
T4-Q2O	BG2E	Calluna vulgaris–Eriophorum spp. bog	High Sphagnum	HS1	Sphagnum subnitens - Erica tetralix	PB4 - Cutover Bog
T5-Q1W	BG2C	Erica tetralix–Molinia caerulea–Cladonia portentosa bog/heath	Moderate Sphagnum	MS3	Molinia caerulea – Polygala serpyllifolia	PB4 - Cutover Bog
T5-Q2W	BG2C	Erica tetralix–Molinia caerulea–Cladonia portentosa bog/heath	Moderate Sphagnum	MS3	Molinia caerulea – Polygala serpyllifolia	PB4 - Cutover Bog
T5-Q1O	BG2C	Erica tetralix–Molinia caerulea–Cladonia portentosa bog/heath	High Sphagnum	HS3	Sphagnum palustre – Molinia caerulea	PB4 - Cutover Bog
T5-Q2O	BG2E	Calluna vulgaris–Eriophorum spp. bog	High Sphagnum	HS1	Sphagnum subnitens - Erica tetralix	PB4 - Cutover Bog
T6-Q1W	BG2D	Erica tetralix–Schoenus nigricans bog	Low Sphagnum	LS5	Schoenus nigricans	PB4 - Cutover Bog
T6-Q2W	BG2D	Erica tetralix–Schoenus nigricans bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog



Quadrat	IVC Code	IVC Category	Sphagnum Level	IWM Cutover Habitat Type Code	IWM Cutover Habitat Type Category	Fossit Code
T6-Q10	BG2C	Erica tetralix–Molinia caerulea–Cladonia portentosa bog/heath	Low Sphagnum	LS3	Molinia caerulea	PB4 - Cutover Bog
T6-Q20	BG2C	Erica tetralix–Molinia caerulea–Cladonia portentosa bog/heath	Low Sphagnum	LS3	Molinia caerulea	PB4 - Cutover Bog
T7-Q1W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog
T7-Q2W	BG2E	Calluna vulgaris–Eriophorum spp. bog	High Sphagnum	HS1	Sphagnum subnitens - Erica tetralix	PB4 - Cutover Bog
T7-Q10	BG2C	Erica tetralix–Molinia caerulea–Cladonia portentosa bog/heath	High Sphagnum	HS3	Sphagnum palustre – Molinia caerulea	PB4 - Cutover Bog
T7-Q20	BG2C	Erica tetralix–Molinia caerulea–Cladonia portentosa bog/heath	High Sphagnum	HS3	Sphagnum palustre – Molinia caerulea	PB4 - Cutover Bog
T8-Q1W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T8-Q2W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T8-Q10	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T8-Q20	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T9-Q1W	BG2E	Calluna vulgaris–Eriophorum spp. bog	High Sphagnum	HS1	Sphagnum subnitens - Erica tetralix	PB4 - Cutover Bog
T9-Q2W	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T9-Q10	BG2E	Calluna vulgaris–Eriophorum spp. bog	Low Sphagnum	LS1	Calluna vulgaris	PB4 - Cutover Bog
T9-Q20	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB4 - Cutover Bog
Q1	BG1C	Schoenus nigricans – Eriophorum angustifolium bog	None	N/A	Calluna vulgaris	PB4 - Cutover Bog
Q2	BG1C	Schoenus nigricans – Eriophorum angustifolium bog	None	N/A	Calluna vulgaris	PB4 - Cutover Bog
Q3	BG2F	<i>Trichophorum cespitosum/germanicum</i> – <i>Eriophorum angustifolium</i> peatland	None	N/A	Calluna vulgaris	PB4 - Cutover Bog
Q4	BG2F	<i>Trichophorum cespitosum/germanicum</i> – <i>Eriophorum angustifolium</i> peatland	None	N/A	Calluna vulgaris	PB4 - Cutover Bog
Q5	BG1C	Schoenus nigricans – Eriophorum angustifolium bog	None	N/A	Calluna vulgaris	PB4 - Cutover Bog
Q6	BG1C	Schoenus nigricans – Eriophorum angustifolium bog	None	N/A	Calluna vulgaris	PB4 - Cutover Bog



Quadrat	IVC Code	IVC Category	Sphagnum Level	IWM Cutover Habitat Type Code	IWM Cutover Habitat Type Category	Fossit Code
Q7	BG2F	<i>Trichophorum cespitosum/germanicum</i> – <i>Eriophorum angustifolium</i> peatland	None	N/A	Calluna vulgaris	PB4 - Cutover Bog
Q8	BG2F	<i>Trichophorum cespitosum/germanicum</i> – <i>Eriophorum angustifolium</i> peatland	None	N/A	Calluna vulgaris	PB4 - Cutover Bog
Q9	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB3 – Blanket Bog
Q10	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB3 – Blanket Bog
Q11	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB3 – Blanket Bog
Q12	BG2E	Calluna vulgaris–Eriophorum spp. bog	Moderate Sphagnum	MS1	Calluna vulgaris - Sphagnum subnitens	PB3 – Blanket Bog





Appendix B Plot data – DEFRA Condition Assessment

Muingmore Windfarm

RWE Renewables Ireland

Glasshouses 2, 92 George's Street Lower Dún Laoghaire, Co. Dublin, A96 VR66

Prepared by:

SLR Environmental Consulting (Ireland) Ltd

7 Dundrum Business Park, Windy Arbour, Dublin,
D14 N2Y7

SLR Project No.: 501.V00727.00008

Condition Sheet: WETLAND Habitat Type		LOCATION 1																												
Habitat Types																														
<p>Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide.</p> <p>Wetland - Blanket bog</p> <p>Wetland - Depression on peat substrates (H7150)</p> <p>Wetland - Fens (upland and lowland)</p> <p>Wetland - Lowland raised bog</p> <p>Wetland - Oceanic valley mire [1] (D2.1)</p> <p>Wetland - Purple moor grass and rush pastures</p> <p>Wetland - Reedbeds</p> <p>Wetland - Transition mires and quaking bogs (H7140)</p>																														
Habitat Description																														
<p>Cutover bog which has recolonised. There are regular drains cut every 5m which run the full length of the habitat. These drains are deep and show the peat depth is greater than 50cm indicating the habitat does not align with Heathland habitat. The vegetation shows signs of some hummock formation and there is encroachment from trees such as Pine sp. throughout in low enough density.</p> <p>Species identified on site within the PB4 - Cutover bog habitat with their relative abundance as per the DOMIN scale; as of 04 November 2024</p> <table border="1"> <thead> <tr> <th>Common Name</th> <th>Scientific Name</th> <th>Category</th> </tr> </thead> <tbody> <tr> <td>Heather</td> <td><i>Calluna vulgaris</i></td> <td>Dominant</td> </tr> <tr> <td>Soft-rush</td> <td><i>Juncus effusus</i></td> <td>Dominant</td> </tr> <tr> <td>Cross-leaved Heath</td> <td><i>Erica tetralix</i></td> <td>Frequent</td> </tr> <tr> <td>Hard-fern</td> <td><i>Blechnum spicant</i></td> <td>Occasional</td> </tr> <tr> <td>Great Wood-rush</td> <td><i>Luzula sylvatica</i></td> <td>Occasional</td> </tr> <tr> <td>Devil's-bit Scabious</td> <td><i>Succisa pratensis</i></td> <td>Rare</td> </tr> <tr> <td>Bog Pimpernel</td> <td><i>Anagallis tenella</i></td> <td>Rare</td> </tr> <tr> <td>Bog Asphodel</td> <td><i>Narthecium ossifragum</i></td> <td>Rare</td> </tr> </tbody> </table>				Common Name	Scientific Name	Category	Heather	<i>Calluna vulgaris</i>	Dominant	Soft-rush	<i>Juncus effusus</i>	Dominant	Cross-leaved Heath	<i>Erica tetralix</i>	Frequent	Hard-fern	<i>Blechnum spicant</i>	Occasional	Great Wood-rush	<i>Luzula sylvatica</i>	Occasional	Devil's-bit Scabious	<i>Succisa pratensis</i>	Rare	Bog Pimpernel	<i>Anagallis tenella</i>	Rare	Bog Asphodel	<i>Narthecium ossifragum</i>	Rare
Common Name	Scientific Name	Category																												
Heather	<i>Calluna vulgaris</i>	Dominant																												
Soft-rush	<i>Juncus effusus</i>	Dominant																												
Cross-leaved Heath	<i>Erica tetralix</i>	Frequent																												
Hard-fern	<i>Blechnum spicant</i>	Occasional																												
Great Wood-rush	<i>Luzula sylvatica</i>	Occasional																												
Devil's-bit Scabious	<i>Succisa pratensis</i>	Rare																												
Bog Pimpernel	<i>Anagallis tenella</i>	Rare																												
Bog Asphodel	<i>Narthecium ossifragum</i>	Rare																												
<p>For Oceanic valley mires - see EUNIS</p> <p>See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below:</p> <p>Coastal and floodplain grazing marsh UK BAP Priority Habitat description</p> <p>Priority Habitat Inventory (England) - data.gov.uk</p> <p>All other wetland habitats - see UK Habitat Classification (UKHab):</p>																														
On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	4 th November 2024 Dr Andrew Torsney																											



	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference	476575 821833	Habitat parcel reference	LOCATION 1
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all wetland habitat types:			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	There are regular drains cut every 5m which run the full length of the habitat. The area is intensively drained.
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpernel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site – the drainage ditches are free from contaminants, but they are stagnant/no flow. This criteria is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	No	Prevalent and pervasive scrub encroachment form the surrounding conifer plantation. As much as 20-25%.



E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are recorded in the quadrat data and surrounding area.
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A
Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	Yes	Sphagnum is less than 20-22% and dwarf shrubs are less than 75%.
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A



Essential criterion achieved (required for Good condition) Yes or No:		No	
Number of criteria passed		4	
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/√	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.	Good (3)	N/A	
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.	Moderate (2)	N/A	
• Passes 2 or fewer core criteria.	Poor (1)	N/A	
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			
• Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type).	Good (3)	-	
• Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type).	Moderate (2)	3 Core 1 Additional	



• Passes 3 or fewer criteria.	Poor (1)	-	
Suggested enhancement interventions to improve condition score			
<p>Block drains. Remove and manage invasive species. Remove and manage scrub encroachment.</p>			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site. Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare. Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site. Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			



Condition Sheet: WETLAND Habitat Type		LOCATION 2	
Habitat Types			
Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide. Wetland - Blanket bog Wetland - Depression on peat substrates (H7150) Wetland - Fens (upland and lowland) Wetland - Lowland raised bog Wetland - Oceanic valley mire [1] (D2.1) Wetland - Purple moor grass and rush pastures Wetland - Reedbeds Wetland - Transition mires and quaking bogs (H7140)			
Habitat Description			
<p>Cutover peatland that has regularised drainage ditches every 5m which run the full length of the site. The ditches are between 1.5 and 2 m deep showing the depth of remaining peat is far greater than 50cm (indicative of heathland habitat). This area is notable drying than the area to the south and the encroachment from trees is less pronounced but there are tracks of brambles in some of the ditches.</p>			
<p>For Oceanic valley mires - see EUNIS See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below: Coastal and floodplain grazing marsh UK BAP Priority Habitat description Priority Habitat Inventory (England) - data.gov.uk All other wetland habitats - see UK Habitat Classification (UKHab):</p>			
On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	4 th November 2024 Dr Andrew Torsney
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference	476476 822187	Habitat parcel reference	LOCATION 2
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)



Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	There are regular drains cut every 5m which run the full length of the habitat. The area is intensively drained.
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpernel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site – the drainage ditches are free from contaminants, but they are stagnant/no flow. This criterion is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	No	Prevalent and pervasive scrub encroachment form the surrounding conifer plantation. As much as 20-25%.
E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are recorded in the quadrat data and surrounding area.



Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A
Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	No	Sphagnum is less than 10% and dwarf shrubs are less than 75%.
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A
Essential criterion achieved (required for Good condition) Yes or No:			No
Number of criteria passed			3
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.		Good (3)	N/A



<ul style="list-style-type: none"> • Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A. 	Moderate (2)	N/A	
<ul style="list-style-type: none"> • Passes 2 or fewer core criteria. 	Poor (1)	N/A	
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			
<ul style="list-style-type: none"> • Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type). 	Good (3)	-	
<ul style="list-style-type: none"> • Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type). 	Moderate (2)	-	
<ul style="list-style-type: none"> • Passes 3 or fewer criteria. 	Poor (1)	3 Core only	
Suggested enhancement interventions to improve condition score			
<p>Block drains. Remove and manage invasive species. Remove and manage scrub encroachment.</p>			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site. Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare. Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site. Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			



Condition Sheet: WETLAND Habitat Type		LOCATION 3	
Habitat Types			
Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide. Wetland - Blanket bog Wetland - Depression on peat substrates (H7150) Wetland - Fens (upland and lowland) Wetland - Lowland raised bog Wetland - Oceanic valley mire [1] (D2.1) Wetland - Purple moor grass and rush pastures Wetland - Reedbeds Wetland - Transition mires and quaking bogs (H7140)			
Habitat Description			
Cutover peatland with recolonised species which are consistent with the rest of the site. Drainage ditches are regularised with higher instances of heather in the ditches than between indicating extensive drying. Scrub encroachment is evident throughout.			
For Oceanic valley mires - see EUNIS See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below: Coastal and floodplain grazing marsh UK BAP Priority Habitat description Priority Habitat Inventory (England) - data.gov.uk All other wetland habitats - see UK Habitat Classification (UKHab):			
On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	4 th November 2024 Dr Andrew Torsney
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference	476178 822633	Habitat parcel reference	LOCATION 3
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)



Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	There are regular drains cut every 5m which run the full length of the habitat. The area is intensively drained.
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpnel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site – the drainage ditches are free from contaminants, but they are stagnant/no flow. This criterion is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	No	Prevalent and pervasive scrub encroachment form the surrounding conifer plantation. As much as 20-25%.
E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are recorded in the quadrat data and surrounding area.



Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A
Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	No	Sphagnum is less than 10% and dwarf shrubs are less than 75%.
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A
Essential criterion achieved (required for Good condition) Yes or No:			No
Number of criteria passed			3
Condition Assessment Result	Condition Assessment Score	Score Achieved x/√	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.		Good (3)	N/A
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.		Moderate (2)	N/A
• Passes 2 or fewer core criteria.		Poor (1)	N/A



Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			
<ul style="list-style-type: none"> • Passes 5 or 6 core criteria including criterion A; AND <ul style="list-style-type: none"> • Passes additional criterion G, H, I or J (choose the one specified for the habitat type). 	Good (3)	-	
<ul style="list-style-type: none"> • Passes 4 or 5 of 7 criteria; OR <ul style="list-style-type: none"> • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type). 	Moderate (2)	-	
<ul style="list-style-type: none"> • Passes 3 or fewer criteria. 	Poor (1)	3 Core only	
Suggested enhancement interventions to improve condition score			
<p>Block drains. Remove and manage invasive species. Remove and manage scrub encroachment.</p>			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site. Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare. Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site. Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			



Condition Sheet: WETLAND Habitat Type		LOCATION 4	
Habitat Types			
Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide. Wetland - Blanket bog Wetland - Depression on peat substrates (H7150) Wetland - Fens (upland and lowland) Wetland - Lowland raised bog Wetland - Oceanic valley mire [1] (D2.1) Wetland - Purple moor grass and rush pastures Wetland - Reedbeds Wetland - Transition mires and quaking bogs (H7140)			
Habitat Description			
<p>There is a clear dominance of <i>Juncus effusus</i> with heather struggling to take hold. Signs of heather being restricted to drainage ditches which are extensive, spanning the full width of the site and regular every 5m. Heather becomes more dominant as you move north within the land parcel. The heather in this section of lands is notably more mature than in the other sections of land and there is a large sheep herd grazing within.</p>			
<p>For Oceanic valley mires - see EUNIS See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below: Coastal and floodplain grazing marsh UK BAP Priority Habitat description Priority Habitat Inventory (England) - data.gov.uk All other wetland habitats - see UK Habitat Classification (UKHab):</p>			
On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	4 th November 2024 Dr Andrew Torsney
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference	476311 823520	Habitat parcel reference	LOCATION 4
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)



Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	There are regular drains cut every 5m which run the full length of the habitat. The area is intensively drained.
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpnel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site – the drainage ditches are free from contaminants, but they are stagnant/no flow. This criterion is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	No	Prevalent and pervasive scrub encroachment form the surrounding conifer plantation. As much as 20-25%.
E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are recorded in the quadrat data and surrounding area.
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A



Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	No	Sphagnum is less than 15% and dwarf shrubs are less than 75%. There are some areas with as high as 20% but over the whole polygon this is not frequent.
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A
Essential criterion achieved (required for Good condition) Yes or No:			No
Number of criteria passed			3
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.		Good (3)	N/A
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.		Moderate (2)	N/A
• Passes 2 or fewer core criteria.		Poor (1)	N/A
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			



<ul style="list-style-type: none"> • Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type). 	Good (3)	-	
<ul style="list-style-type: none"> • Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type). 	Moderate (2)	-	
<ul style="list-style-type: none"> • Passes 3 or fewer criteria. 	Poor (1)	3 Core only	
Suggested enhancement interventions to improve condition score			
<p>Block drains. Remove and manage invasive species. Remove and manage scrub encroachment.</p>			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site. Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare. Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site. Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			



Habitat Types

Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide.

Wetland - Blanket bog

Wetland - Depression on peat substrates (H7150)

Wetland - Fens (upland and lowland)

Wetland - Lowland raised bog

Wetland - Oceanic valley mire [1] (D2.1)

Wetland - Purple moor grass and rush pastures

Wetland - Reedbeds

Wetland - Transition mires and quaking bogs (H7140)

Habitat Description

Cutover bog that has been recolonised; the drainage ditches are regular roughly 5m apart spanning the width of the habitat. There is a grass track along the western boundary with no hard core and well vegetated. Scrub encroachment present with willow sp. and pine sp. less than 10% grading higher as you go south – distinct separation in southern polygon. Some species such as thistle and hawksbit are more abundant along track.

Species identified on site within the PB4 - Cutover bog habitat with their relative abundance as per the DOMIN scale; as of 04 November 2024

Common Name	Scientific Name	Category
Soft-rush	<i>Juncus effusus</i>	Dominant
Heather	<i>Calluna vulgaris</i>	Dominant
Purple Moor-grass	<i>Molinia caerulea</i>	Dominant
Moss Sp.	<i>Moss Sp.</i>	Abundant
Autumn Hawkbit	<i>Scorzoneroides autumnalis</i>	Occasional
Glaucous Sedge	<i>Carex flacca</i>	Occasional
Thistle Sp.	<i>Thistle Sp.</i>	Occasional
Tormentil	<i>Potentilla erecta</i>	Occasional
Cross-leaved Heath	<i>Erica tetralix</i>	Occasional
Purple Moor-grass	<i>Molinia caerulea</i>	Occasional
Hard-fern	<i>Blechnum spicant</i>	Occasional
Prickly Heath	<i>Gaultheria mucronata</i>	Rare
Heath Bedstraw	<i>Galium saxatile</i>	Rare
Creeping Buttercup	<i>Ranunculus repens</i>	Rare
Cock's-foot	<i>Dactylis glomerata</i>	Rare



Brambles	<i>Rubus fruticosus</i>	Rare
Rhododendron	<i>Rhododendron ponticum</i>	Rare
Hard-fern	<i>Blechnum spicant</i>	Rare
Purple Moor-grass	<i>Molinia caerulea</i>	Rare
Autumn Hawkbit	<i>Scorzoneroides autumnalis</i>	Rare
Cross-leaved Heath	<i>Erica tetralix</i>	Rare

[For Oceanic valley mires - see EUNIS](#)

See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below:

[Coastal and floodplain grazing marsh UK BAP Priority Habitat description](#)

[Priority Habitat Inventory \(England\) - data.gov.uk](#)

All other wetland habitats - see UK Habitat Classification (UKHab):

On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	4 th November 2024 Dr Andrew Torsney
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference	476999 823655	Habitat parcel reference	LOCATION 5
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	There are regular drains cut every 5m which run the full length of the habitat. The area is intensively drained.



B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpernel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site – the drainage ditches are free from contaminants, but they are stagnant/no flow. This criterion is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	No	Prevalent and pervasive scrub encroachment form the surrounding conifer plantation. As much as 20-25%.
E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are recorded in the quadrat data and surrounding area.
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A
Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	Yes	Sphagnum is as high as 65% in some areas and dwarf shrubs are less than 75%. There are some areas with as high as 20% but over the whole polygon this is not frequent.
Additional Criterion - must be assessed for Reedbed habitats only:			



I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A
Essential criterion achieved (required for Good condition) Yes or No:			No
Number of criteria passed			4
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/√	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.		Good (3)	N/A
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.		Moderate (2)	N/A
• Passes 2 or fewer core criteria.		Poor (1)	N/A
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			
• Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type).		Good (3)	-
• Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type).		Moderate (2)	3 Core 1 Additional



• Passes 3 or fewer criteria.	Poor (1)	-	
Suggested enhancement interventions to improve condition score			
Block drains. Remove and manage invasive species. Remove and manage scrub encroachment.			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description.</p> <p>Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.</p> <p>Footnote 3 – Wildlife and Countryside Act 1981 (as amended).</p> <p>Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site.</p> <p>Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare.</p> <p>Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site.</p> <p>Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			



Condition Sheet: WETLAND Habitat Type		LOCATION 6	
Habitat Types			
Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide. Wetland - Blanket bog Wetland - Depression on peat substrates (H7150) Wetland - Fens (upland and lowland) Wetland - Lowland raised bog Wetland - Oceanic valley mire [1] (D2.1) Wetland - Purple moor grass and rush pastures Wetland - Reedbeds Wetland - Transition mires and quaking bogs (H7140)			
Habitat Description			
The cutover peatland is notable compacted to the south with instances of rhododendron invasion dotted throughout but most extensive to the east. The area is relatively consistent with the other peatlands around.			
For Oceanic valley mires - see EUNIS See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below: Coastal and floodplain grazing marsh UK BAP Priority Habitat description Priority Habitat Inventory (England) - data.gov.uk All other wetland habitats - see UK Habitat Classification (UKHab):			
On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	4 th November 2024 Dr Andrew Torsney
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference	477015 823113	Habitat parcel reference	LOCATION 6
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)



Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	There are regular drains cut every 5m which run the full length of the habitat. The area is intensively drained.
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpernel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site – the drainage ditches are free from contaminants, but they are stagnant/no flow. This criterion is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	No	Prevalent and pervasive scrub encroachment form the surrounding conifer plantation. As much as 20-25%.
E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are recorded in the quadrat data and surrounding area.
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			



G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A
Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	Yes	Sphagnum is as high as 75% in some areas and dwarf shrubs are less than 75%. There are some areas with as high as 20% but over the whole polygon this is not frequent.
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A
Essential criterion achieved (required for Good condition) Yes or No:			No
Number of criteria passed			4
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/√	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.		Good (3)	N/A
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.		Moderate (2)	N/A
• Passes 2 or fewer core criteria.		Poor (1)	N/A



Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):		
<ul style="list-style-type: none"> • Passes 5 or 6 core criteria including criterion A; AND <ul style="list-style-type: none"> • Passes additional criterion G, H, I or J (choose the one specified for the habitat type). 	Good (3)	-
<ul style="list-style-type: none"> • Passes 4 or 5 of 7 criteria; OR <ul style="list-style-type: none"> • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type). 	Moderate (2)	3 Core 1 Additional
<ul style="list-style-type: none"> • Passes 3 or fewer criteria. 	Poor (1)	-
Suggested enhancement interventions to improve condition score		
<p>Block drains. Remove and manage invasive species. Remove and manage scrub encroachment.</p>		
Footnotes		
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site. Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare. Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site. Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>		



Condition Sheet: WETLAND Habitat Type		LOCATION 7	
Habitat Types			
Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide. Wetland - Blanket bog Wetland - Depression on peat substrates (H7150) Wetland - Fens (upland and lowland) Wetland - Lowland raised bog Wetland - Oceanic valley mire [1] (D2.1) Wetland - Purple moor grass and rush pastures Wetland - Reedbeds Wetland - Transition mires and quaking bogs (H7140)			
Habitat Description			
The cutover peatland with instances of rhododendron invasion dotted throughout but most extensive to the east. The area is relatively consistent with the other peatlands around.			
For Oceanic valley mires - see EUNIS See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below: Coastal and floodplain grazing marsh UK BAP Priority Habitat description Priority Habitat Inventory (England) - data.gov.uk All other wetland habitats - see UK Habitat Classification (UKHab):			
On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	4 th November 2024 Dr Andrew Torsney
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference	477508 823267	Habitat parcel reference	LOCATION 7
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all wetland habitat types :			



A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	There are regular drains cut every 5m which run the full length of the habitat. The area is intensively drained.
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpernel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site – the drainage ditches are free from contaminants, but they are stagnant/no flow. This criterion is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	No	Prevalent and pervasive scrub encroachment form the surrounding conifer plantation. As much as 20-25%.
E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are recorded in the quadrat data and surrounding area.
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A
Additional Criterion - must be assessed for Bog habitats only:			



H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	No	Sphagnum is less than 10% and dwarf shrubs are less than 75%. There are some areas with as high as 20% but over the whole polygon this is not frequent.
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A
Essential criterion achieved (required for Good condition) Yes or No:			No
Number of criteria passed			3
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.		Good (3)	N/A
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.		Moderate (2)	N/A
• Passes 2 or fewer core criteria.		Poor (1)	N/A
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			
• Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type).		Good (3)	-



<ul style="list-style-type: none"> • Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type). 	Moderate (2)	-	
<ul style="list-style-type: none"> • Passes 3 or fewer criteria. 	Poor (1)	3 Core Only	
Suggested enhancement interventions to improve condition score			
<p>Block drains. Remove and manage invasive species. Remove and manage scrub encroachment.</p>			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site. Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare. Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site. Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			



Condition Sheet: WETLAND Habitat Type		LOCATION 8	
Habitat Types			
Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide. Wetland - Blanket bog Wetland - Depression on peat substrates (H7150) Wetland - Fens (upland and lowland) Wetland - Lowland raised bog Wetland - Oceanic valley mire [1] (D2.1) Wetland - Purple moor grass and rush pastures Wetland - Reedbeds Wetland - Transition mires and quaking bogs (H7140)			
Habitat Description			
Area to the NE of the site is the wettest with high levels of sphagnum. The drains have been revegetated by reeds causing extra water retention so it appears to be naturally regenerating/recovering.			
For Oceanic valley mires - see EUNIS See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below: Coastal and floodplain grazing marsh UK BAP Priority Habitat description Priority Habitat Inventory (England) - data.gov.uk All other wetland habitats - see UK Habitat Classification (UKHab):			
On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	4 th November 2024 Dr Andrew Torsney
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference	477642 823614	Habitat parcel reference	LOCATION 8
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)



Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	There are regular drains cut every 5m which run the full length of the habitat. The area is intensively drained.
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpernel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site – the drainage ditches are free from contaminants, but they are stagnant/no flow. This criterion is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	No	Prevalent and pervasive scrub encroachment form the surrounding conifer plantation. As much as 20-25%.
E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are recorded in the quadrat data and surrounding area.
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A



Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	Yes	Sphagnum is as high as 75% in some areas and dwarf shrubs are less than 75%. There are some areas with as high as 20% but over the whole polygon this is not frequent.
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A
Essential criterion achieved (required for Good condition) Yes or No:			No
Number of criteria passed			4
Condition Assessment Result	Condition Assessment Score	Score Achieved *//	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.		Good (3)	N/A
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.		Moderate (2)	N/A
• Passes 2 or fewer core criteria.		Poor (1)	N/A
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			



<ul style="list-style-type: none"> • Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type). 	Good (3)	-	
<ul style="list-style-type: none"> • Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type). 	Moderate (2)	3 Core 1 Additional	
<ul style="list-style-type: none"> • Passes 3 or fewer criteria. 	Poor (1)	-	
Suggested enhancement interventions to improve condition score			
<p>Block drains. Remove and manage invasive species. Remove and manage scrub encroachment.</p>			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 3 – Wildlife and Countryside Act 1981 (as amended). Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site. Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare. Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site. Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			





Location of the areas assessed for condition relative to the DEFEA and UK Habitats Process



Condition Sheet: WETLAND Habitat Type	Overrun Area 1																																																	
Habitat Types																																																		
<p>Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide.</p> <p>Wetland - Blanket bog</p> <p>Wetland - Depression on peat substrates (H7150)</p> <p>Wetland - Fens (upland and lowland)</p> <p>Wetland - Lowland raised bog</p> <p>Wetland - Oceanic valley mire [1] (D2.1)</p> <p>Wetland - Purple moor grass and rush pastures</p> <p>Wetland - Reedbeds</p> <p>Wetland - Transition mires and quaking bogs (H7140)</p>																																																		
Habitat Description																																																		
<p>Really variable topography with lots of hammocks and hollows. No pools except surrounding the scrubland patch to the south which looks like deep mechanical cuts which have vegetated over. The site is less wet than would be expected in winter - and gets notably drier as you move north. The Sphagnum coverage is consistent with the highest percentage cover being in the south at about 30%. This is not identified to be priority active peatland as the Sphagnum cover is less than 40%. However, the site is in good condition and has potential to be restored to priority active status. There are some drainage ditches, but these are shallow and have Sphagnum blockages, so it is not clear from the site visit why the water retention profile seems weak. There is a notable coverage of non-customs lichens. The floral diversity aligns well with the indicator species of the blanket bog hammer I habitat - however it was identified to be species poor. This is partially due to the timing of the surveys. This is identified to be an annex I blanket bog in favourable condition which is not priority due to the Sphagnum cover. Nonetheless it is noted that it is close to priority status. The area towards the south of the site which is marked separately is the same species composition as the blanket bog to the north - however, there are large standing pools with 100% Sphagnum cover as can be seen in the photo. Therefore, it is mapped separately to denote the wetter area. These pools look like there are man-made and well revegetated.</p> <p>Species identified in the habitat are listed in the table below according to their relative abundance.</p>																																																		
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Heath Milkwort	<i>Polygala serpyllifolia</i>	Rare
Glaucous Sedge	<i>Carex flacca</i>	Rare
Gorse	<i>Ulex europaeus</i>	Rare
Rhododendron	<i>Rhododendron ponticum</i>	Rare
Stiff Sedge	<i>Carex bigelowii</i>	Rare

[For Oceanic valley mires - see EUNIS](#)

See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below:

[Coastal and floodplain grazing marsh UK BAP Priority Habitat description](#)

[Priority Habitat Inventory \(England\) - data.gov.uk](#)

All other wetland habitats - see UK Habitat Classification (UKHab):

On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	7 th January 2026 Dr Andrew Torsney
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A
Grid reference		Habitat parcel reference	Over-run Area 1
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	Yes	There are no drains on site – there is a ditch that is vegetated over on either side of the fence through the site. The south of the field has a ditch all the way along the road along the southern end. But other than these there is good water retention on site.



B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	Yes	This is a well representative community composition however, most of the indicator species of higher value such as bog cotton, bog pimpernel etc are at low abundances. The site is notably dominated by soft rush and heather. There is scrub encroachment prevalent throughout.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	There are no water courses throughout the site. This criterion is passed due to lack of water supply through the site.
D	Cover of scrub and scattered trees are less than 10%.	Yes	There is scrub to the north and south of the site over 10%. However, there is no scrub throughout the main body of the site beyond a few saplings.
E	Cover of bare ground is less than 5%.	Yes	Limited bare ground, full sward coverage.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	No	Invasive species are not recorded in the quadrat data and surrounding area. The area to the north has extensive rhododendron stands.
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A
Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	Yes	Sphagnum is less than 20-22% and dwarf shrubs are less than 75%.
Additional Criterion - must be assessed for Reedbed habitats only:			



I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A
Essential criterion achieved (required for Good condition) Yes or No:			Yes
Number of criteria passed			5
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/√	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.	Good (3)	N/A	
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.	Moderate (2)	N/A	
• Passes 2 or fewer core criteria.	Poor (1)	N/A	
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			



<ul style="list-style-type: none"> • Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type). 	Good (3)	5 Core 1 Additional	
<ul style="list-style-type: none"> • Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type). 	Moderate (2)	-	
<ul style="list-style-type: none"> • Passes 3 or fewer criteria. 	Poor (1)	-	
Suggested enhancement interventions to improve condition score			
Unknown due to good condition.			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description.</p> <p>Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.</p> <p>Footnote 3 – Wildlife and Countryside Act 1981 (as amended).</p> <p>Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site.</p> <p>Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare.</p> <p>Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site.</p> <p>Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			



Condition Sheet: WETLAND Habitat Type		Overrun Area 3													
Habitat Types															
Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide. Wetland - Blanket bog Wetland - Depression on peat substrates (H7150) Wetland - Fens (upland and lowland) Wetland - Lowland raised bog Wetland - Oceanic valley mire [1] (D2.1) Wetland - Purple moor grass and rush pastures Wetland - Reedbeds Wetland - Transition mires and quaking bogs (H7140)															
Habitat Description															
<p>This habitat has been recently rotavated and is recognising bare peat. The peat depth is over 3m deep as observed from the deep drainage ditches around the edge of the site. There are several shallow ditches/scars through the main habitat area. The main species which are decolonising first are deer grass, soft rush, and grass species such as false oatgrass and/or purple moor grass. Overall, the habitat is in extremely poor condition with roughly 70% bare ground and no evidence of Sphagnum.</p> <p>Species identified in the habitat are listed in the table below according to their relative abundance.</p> <table border="1"> <thead> <tr> <th>Common Name</th> <th>Scientific Name</th> <th>Category</th> </tr> </thead> <tbody> <tr> <td>Soft-rush</td> <td><i>Juncus effusus</i></td> <td>Frequent</td> </tr> <tr> <td>Deergrass</td> <td><i>Trichophorum cespitosum</i></td> <td>Frequent</td> </tr> <tr> <td>Timothy</td> <td><i>Phleum pratense</i></td> <td>Rare</td> </tr> </tbody> </table>				Common Name	Scientific Name	Category	Soft-rush	<i>Juncus effusus</i>	Frequent	Deergrass	<i>Trichophorum cespitosum</i>	Frequent	Timothy	<i>Phleum pratense</i>	Rare
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On-site or off-site, site name and location	Muingmore Windfarm	Survey date and Surveyor name	7 th January 2026 Dr Andrew Torsney												
	Assessment was undertaken during the winter period – sub optimal. However vegetative ID was used.	Survey reference (if relating to a wider survey)	N/A												



Grid reference		Habitat parcel reference	
		Overrun Area 3	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	No	Completely cutover and rotovated.
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	No	Devoid of species – some areas with 90% reed and grass cover and other areas with 96% bare peat.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	No	No water supply to the site. Stream to the north is fast flowing not thought to be flowing into the site.
D	Cover of scrub and scattered trees are less than 10%.	Yes	Only because the site is devoid of species.



E	Cover of bare ground is less than 5%.	No	96% bare.
F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	Yes	Only because the site is devoid of species.
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	N/A	N/A
Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.	No	Zero percent sphagnum.
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.	N/A	N/A
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.	N/A	N/A




Essential criterion achieved (required for Good condition) Yes or No:			No
Number of criteria passed			4
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/√	
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
• Passes 5 or 6 core criteria, including criterion A.	Good (3)	N/A	
• Passes 3 or 4 core criteria; OR • Passes 5 core criteria but fails criterion A.	Moderate (2)	N/A	
• Passes 2 or fewer core criteria.	Poor (1)	N/A	
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			
• Passes 5 or 6 core criteria including criterion A; AND • Passes additional criterion G, H, I or J (choose the one specified for the habitat type).	Good (3)	-	
• Passes 4 or 5 of 7 criteria; OR • Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type).	Moderate (2)	-	



<ul style="list-style-type: none"> • Passes 3 or fewer criteria. 	Poor (1)	For assessment purposed it is views to be fully failing. Only 2 passes which was just the absence of scrub but this is due to the absence of any vegetation.	
Suggested enhancement interventions to improve condition score			
Block drains. Remove inappropriate management. Allow to recolonise.			
Footnotes			
<p>Footnote 1 – Professional judgement should be used alongside the UKHab description.</p> <p>Footnote 2 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.</p> <p>Footnote 3 – Wildlife and Countryside Act 1981 (as amended).</p> <p>Footnote 4 – Species indicative of suboptimal condition for this habitat type include: creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, common nettle <i>Urtica dioica</i>, docks <i>Rumex</i> spp., and common ragwort <i>Jacobaea vulgaris</i>. There may be additional relevant species local to the region and or site.</p> <p>Footnote 5 – According to the relative abundance DAFOR scale – Dominant, Abundant, Frequent, Occasional or Rare.</p> <p>Footnote 6 – Ericaceous dwarf shrubs include: crowberry <i>Empetrum nigrum</i>, cowberry <i>Vaccinium vitis-idaea</i>, bilberry <i>Vaccinium myrtillus</i>, cranberry <i>Vaccinium oxycoccos</i>, heather <i>Calluna vulgaris</i>, cross-leaved heath <i>Erica tetralix</i>, and bell heather <i>Erica cinerea</i>. There may be additional relevant species local to the region and or site.</p> <p>Footnote 7 – For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic, mesotrophic or oligotrophic.</p>			





Appendix C Plot data – IWM Blanket Bog [7130] Condition Assessment

Muingmore Windfarm

RWE Renewables Ireland

Glasshouses 2, 92 George's Street Lower Dún Laoghaire, Co. Dublin, A96 VR66

Prepared by:

SLR Environmental Consulting (Ireland) Ltd

7 Dundrum Business Park, Windy Arbour, Dublin, D14 N2Y7

SLR Project No.: 501.V00727.00008

Condition Assessment Criteria results for Blanket Bog [7130] from the Irish Wildlife Manuals, No. 79 – Part 1 of 3

Criteria	T11-Q1W	T11-Q2W	T11-Q1O	T11-Q2O	SUB-Q1W	SUB-Q2W	SUB-Q1O	SUB-Q2O	T4-Q1W	T4-Q2W	T4-Q1O	T4-Q2O	T5-Q1W	T5-Q2W	T5-Q1O	T5-Q2O
Number of positive indicator species present \geq 7 (Appendix VI)	1	1	1	0	0	0	0	0	0	0	1	0	1	1	0	0
Cover of bryophyte or lichen species, excluding <i>Sphagnum fallax</i> \geq 10%	1	0	1	1	0	0	0	0	0	1	1	1	1	1	1	1
Cover of each of the following species: <i>Calluna vulgaris</i> , <i>Eleocharis multicaulis</i> , <i>Eriophorum vaginatum</i> , <i>Molinia caerulea</i> , <i>Schoenus nigricans</i> , <i>Trichophorum germanicum</i> individually $<$ 75%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cover of the following negative indicator species: <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium aquilinum</i> , <i>Ranunculus repens</i> collectively $<$ 1%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cover of non-native species $<$ 1% (local)	0	0	0	0	1	1	0	1	1	0	0	1	0	0	0	0
Cover of non-native species $<$ 1% (20m vicinity)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
Cover of scattered native trees and scrub $<$ 10% (20m vicinity)	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
Crushed, broken and/or pulled up <i>Sphagnum</i> species $<$ 10% of <i>Sphagnum</i> cover	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1
Last complete growing season's shoots of ericoids, <i>Empetrum nigrum</i> and <i>Myrica gale</i> showing signs of browsing collectively $<$ 33% (Assess a minimum of 10 shoots distributed across the plot)	1	0	1	1	0	0	0	0	1	0	0	1	1	1	1	1
No signs of burning into the moss, liverwort or lichen layer or exposure of peat surface due to burning (20m vicinity)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No signs of burning inside boundaries of sensitive areas† (20m vicinity)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cover of disturbed bare ground $<$ 10% (local)	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1
Cover of disturbed bare ground $<$ 10% (20m vicinity)	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1
Area showing signs of drainage resulting from heavy trampling or tracking or ditches or peat cutting $<$ 10% (20m vicinity)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cover of erosion gullies and eroded areas within the greater bog mosaic‡ $<$ 5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Fail	6	8	6	7	10	10	9	8	6	7	6	5	5	5	6	6



Condition Assessment Criteria results for Blanket Bog [7130] from the Irish Wildlife Manuals, No. 79 – Part 2 of 3

Criteria	T6-Q1W	T6-Q2W	T6-Q1O	T6-Q2O	T7-Q1W	T7-Q2W	T7-Q1O	T7-Q2O	T8-Q1W	T8-Q2W	T8-Q1O	T8-Q2O	T9-Q1W	T9-Q2W	T9-Q1O	T9-Q2O
Number of positive indicator species present \geq 7 (Appendix VI)	1	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0
Cover of bryophyte or lichen species, excluding <i>Sphagnum fallax</i> \geq 10%	0	1	0	0	1	1	1	1	0	0	0	0	1	0	0	1
Cover of each of the following species: <i>Calluna vulgaris</i> , <i>Eleocharis multicaulis</i> , <i>Eriophorum vaginatum</i> , <i>Molinia caerulea</i> , <i>Schoenus nigricans</i> , <i>Trichophorum germanicum</i> individually $<$ 75%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cover of the following negative indicator species: <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium aquilinum</i> , <i>Ranunculus repens</i> collectively $<$ 1%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cover of non-native species $<$ 1% (local)	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Cover of non-native species $<$ 1% (20m vicinity)	0	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1
Cover of scattered native trees and scrub $<$ 10% (20m vicinity)	1	1	1	1	0	0	1	1	0	0	0	0	1	0	1	1
Crushed, broken and/or pulled up <i>Sphagnum</i> species $<$ 10% of <i>Sphagnum</i> cover	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
Last complete growing season's shoots of ericoids, <i>Empetrum nigrum</i> and <i>Myrica gale</i> showing signs of browsing collectively $<$ 33% (Assess a minimum of 10 shoots distributed across the plot)	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0
No signs of burning into the moss, liverwort or lichen layer or exposure of peat surface due to burning (20m vicinity)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No signs of burning inside boundaries of sensitive areas† (20m vicinity)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cover of disturbed bare ground $<$ 10% (local)	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
Cover of disturbed bare ground $<$ 10% (20m vicinity)	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
Area showing signs of drainage resulting from heavy trampling or tracking or ditches or peat cutting $<$ 10% (20m vicinity)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cover of erosion gullies and eroded areas within the greater bog mosaic‡ $<$ 5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Fail	8	5	6	7	6	7	4	4	8	8	7	7	4	7	6	5



Condition Assessment Criteria results for Blanket Bog [7130] from the Irish Wildlife Manuals, No. 79 – Part 3 of 3

Criteria	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Number of positive indicator species present \geq 7 (Appendix VI)	0	0	0	0	0	0	0	1	1	1	1	1
Cover of bryophyte or lichen species, excluding <i>Sphagnum fallax</i> \geq 10%	0	0	0	0	0	0	0	0	1	1	0	0
Cover of each of the following species: <i>Calluna vulgaris</i> , <i>Eleocharis multicaulis</i> , <i>Eriophorum vaginatum</i> , <i>Molinia caerulea</i> , <i>Schoenus nigricans</i> , <i>Trichophorum germanicum</i> individually $<$ 75%	1	1	1	1	1	1	1	1	1	1	1	1
Cover of the following negative indicator species: <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium aquilinum</i> , <i>Ranunculus repens</i> collectively $<$ 1%	1	1	1	1	1	1	1	1	1	1	1	1
Cover of non-native species $<$ 1% (local)	1	1	1	1	1	1	1	1	1	1	1	1
Cover of non-native species $<$ 1% (20m vicinity)	1	1	1	1	1	1	1	1	1	1	1	1
Cover of scattered native trees and scrub $<$ 10% (20m vicinity)	1	1	1	1	1	1	1	1	1	1	1	1
Crushed, broken and/or pulled up <i>Sphagnum</i> species $<$ 10% of <i>Sphagnum</i> cover	0	0	0	0	0	0	0	0	1	1	1	1
Last complete growing season's shoots of ericoids, <i>Empetrum nigrum</i> and <i>Myrica gale</i> showing signs of browsing collectively $<$ 33% (Assess a minimum of 10 shoots distributed across the plot)	0	0	0	0	0	0	0	0	1	1	1	1
No signs of burning into the moss, liverwort or lichen layer or exposure of peat surface due to burning (20m vicinity)	1	1	1	1	1	1	1	1	1	1	1	1
No signs of burning inside boundaries of sensitive areas† (20m vicinity)	1	1	1	1	1	1	1	1	1	1	1	1
Cover of disturbed bare ground $<$ 10% (local)	0	0	0	0	1	1	0	0	1	1	1	1
Cover of disturbed bare ground $<$ 10% (20m vicinity)	0	0	0	0	1	1	0	0	1	1	1	1
Area showing signs of drainage resulting from heavy trampling or tracking or ditches or peat cutting $<$ 10% (20m vicinity)	0	0	0	0	0	0	0	0	1	1	1	1
Cover of erosion gullies and eroded areas within the greater bog mosaic‡ $<$ 5%	1	1	1	1	1	1	1	1	1	1	1	1
Total Fail	8	8	8	8	5	5	7	7	0	1	1	1





Appendix D Plot data – Photomontage

Muingmore Windfarm

RWE Renewables Ireland

Glasshouses 2, 92 George's Street Lower Dún Laoghaire, Co. Dublin, A96 VR66

Prepared by:

SLR Environmental Consulting (Ireland) Ltd

7 Dundrum Business Park, Windy Arbour, Dublin, D14
N2Y7

SLR Project No.: 501.V00727.00008



Plate 1 Photo record of T4-Q1O as at location (ITM) X - 477095, Y - 823122; 14th November 2024



Plate 2 Photo record of T4-Q2O as at location (ITM) X - 477103, Y - 823102; 14th November 2024





Plate 3 Photo record of T4-Q1W as at location (ITM) X – 477015, Y – 823113; 14th November 2024

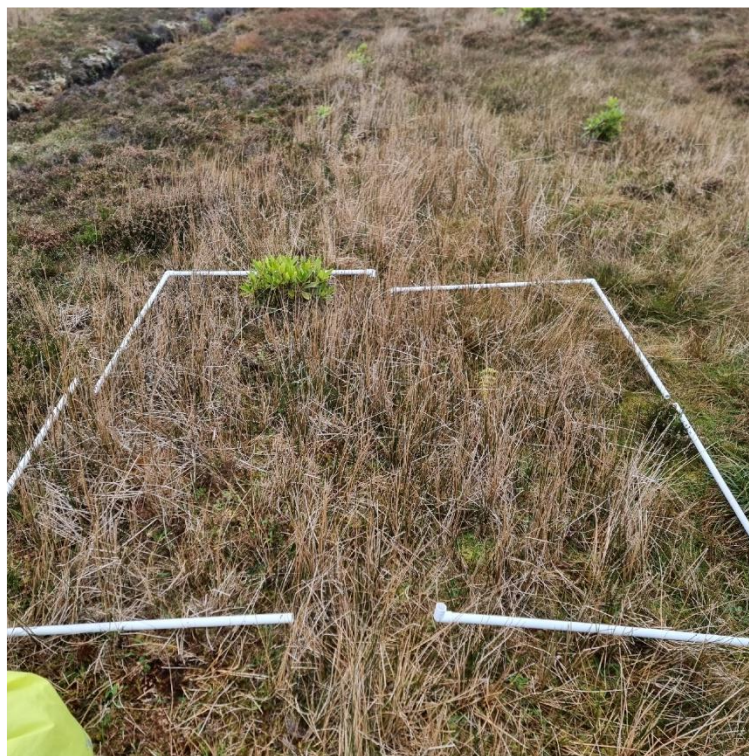


Plate 4 Photo record of T4-Q2W as at location (ITM) X – 476979, Y – 823618; 14th November 2024





Plate 5 Photo record of T5-Q10 as at location (ITM) X – 476999, Y – 823655; 14th November 2024



Plate 6 Photo record of T5-Q20 as at location (ITM) X – 476976, Y – 823667; 14th November 2024



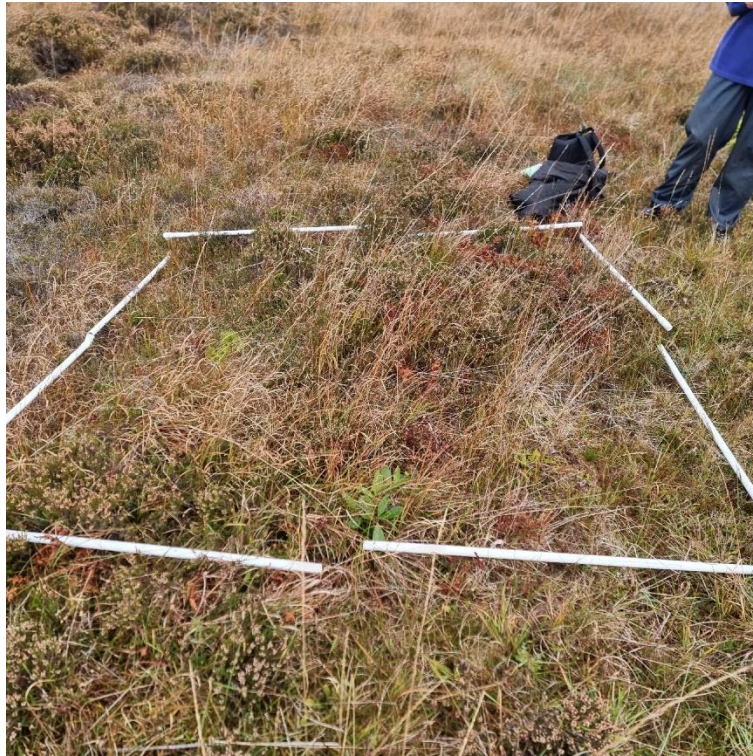


Plate 7 Photo record of T5-Q1W as at location (ITM) X - 476979, Y - 823594; 14th November 2024



Plate 8 Photo record of T5-Q2W as at location (ITM) X - 477037, Y - 823122; 14th November 2024





Plate 9 Photo record of T6-Q1O as at location (ITM) X - 477495, Y - 823222; 14th November 2024



Plate 10 Photo record of T6-Q2O as at location (ITM) X - 477484, Y - 823218; 14th November 2024





Plate 11 Photo record of T6-Q1W as at location (ITM) X – 477530, Y – 823261; 14th November 2024



Plate 12 Photo record of T6-Q2W as at location (ITM) X – 477508, Y – 823267; 14th November 2024





Plate 13 Photo record of T7-Q10 as at location (ITM) X – 477642, Y – 823614; 14th November 2024



Plate 14 Photo record of T7-Q20 as at location (ITM) X – 477625, Y – 823610; 14th November 2024





Plate 15 Photo record of T7-Q1W as at location (ITM) X – 477587, Y – 823676; 14th November 2024



Plate 16 Photo record of T7-Q2W as at location (ITM) X – 477598, Y – 823673; 14th November 2024





Plate 17 Photo record of T8-Q1O as at location (ITM) X – 476467, Y – 822618; 14th November 2024



Plate 18 Photo record of T8-Q2O as at location (ITM) X – 476479, Y – 822618; 14th November 2024





Plate 19 Photo record of T8-Q1W as at location (ITM) X – 476392, Y – 822592; 14th November 2024



Plate 20 Photo record of T8-Q2W as at location (ITM) X – 476402, Y – 822583; 14th November 2024





Plate 21 Photo record of T9-Q1O as at location (ITM) X – 476516, Y – 822228; 14th November 2024



Plate 22 Photo record of T9-Q2O as at location (ITM) X – 476500, Y – 822272; 14th November 2024





Plate 23 Photo record of T9-Q1W as at location (ITM) X – 476467, Y – 822163; 14th November 2024



Plate 24 Photo record of T9-Q2W as at location (ITM) X – 476476, Y – 822187; 14th November 2024





Plate 25 Photo record of T11-Q10 as at location (ITM) X – 476559, Y – 821885; 14th November 2024



Plate 26 Photo record of T11-Q20 as at location (ITM) X – 476598, Y – 821872; 14th November 2024





Plate 27 Photo record of T11-Q1W as at location (ITM) X – 476575, Y – 821833; 14th November 2024



Plate 28 Photo record of T11-Q2W as at location (ITM) X – 476554, Y – 821822; 14th November 2024





Plate 29 Photo record of SUB-Q10 as at location (ITM) X – 476303, Y – 823576; 14th November 2024



Plate 30 Photo record of SUB-Q20 as at location (ITM) X – 476304, Y – 823576; 14th November 2024



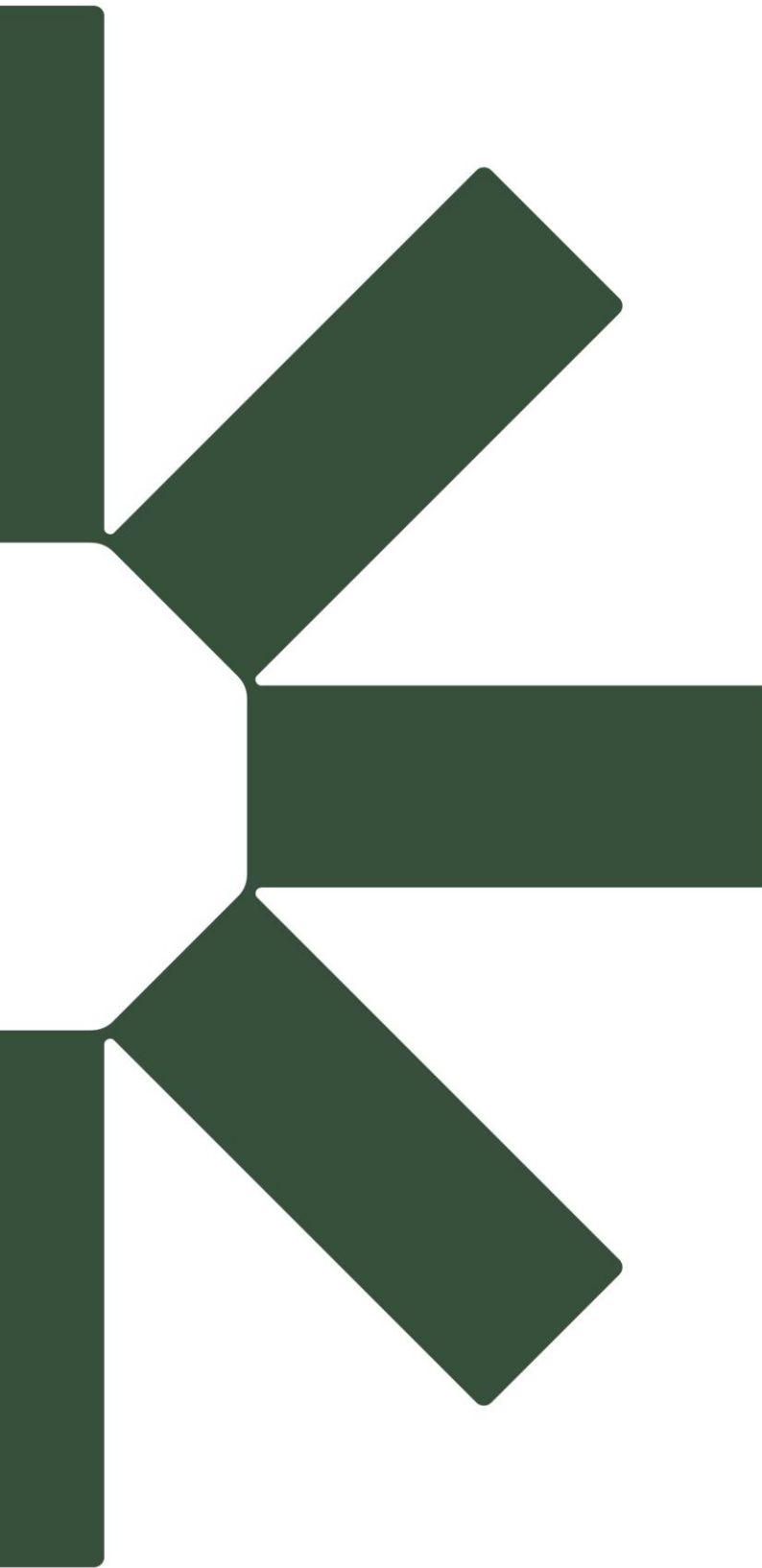


Plate 31 Photo record of SUB-Q1W as at location (ITM) X – 476311, Y – 823520; 14th November 2024



Plate 32 Photo record of SUB-Q2W as at location (ITM) X – 476329, Y – 823516; 14th November 2024





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