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APPENDIX 13-2

LCA ASSESSMENT TABLES

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1.

LANDSCAPE CHARACTER AREA ASSESSMENT TABLES

This appendix comprises an impact assessment addressing the landscape effects of the Proposed Project upon each designated Landscape Character Unit (LCU) scoped in for assessment in Section 13.4.1 of Chapter 13 of this EIAR.

The impact assessment for each LCU is set out in its own table below. In the tables, the term 'Site' refers to the Proposed Project Site and the discussion of theoretical visibility in each LCU refers to Zone of Theoretical Visibility (ZTV) mapping as outlined in Section 13.3 'Visibility of the Proposed Project of the chapter.

It is recommended that the impact assessments in this appendix are read in conjunction with Figure 13-6 in Chapter 13. Figure 13-6 illustrates the boundary of each LCU and is overlain by the Half-Blade ZTV, which extends to the 15km LCA Study Area for the assessment of effects on designated LCUs; the brief and full methodologies for determining the LCA Study Area boundary are provided respectively in Section 13.2.2 'Scope and Definition of LVIA Study Area' of the main chapter and in Section 1.4 of the same name in Appendix 13-1: LVIA Methodology.

Regarding the 'Significance of Effect' ratings in the tables below: The definition of classification is taken from the 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' of the Environmental Protection Agency of Ireland (EPA) (2022); refer to Section 1.7.5 'Landscape Effects Assessment Matrix' in Appendix 13-1.

1.1

Landscape Character Areas

1.1.1

LCU L - South East Mayo Plains (contains all Proposed turbines)

County Mayo LCU L: South-East Mayo Plains	
Distance from the site to Nearest/Furthest Area of LCU	All of the proposed turbines are located within this LCA.
LCU Key Characteristics (Landscape Appraisal for County Mayo)	Description: "This area is a mosaic of high-quality pasture with distinct paddocks divided by rock walls and well-maintained hedgerows. There are occasional pockets of transitional pasture and woodland scrub throughout the gently rolling drumlins." Land Uses: "The main land use of the region is livestock rearing, conspicuous on the landscape by the dominance of pasturelands. Agricultural lands, complex cultivation patterns and conifer forests are also representative of the land uses in the area. Intermittent areas of urban fabric reveal the significance of urban settlements (i.e. Ballyhaunis, Claremorris and Ballinrobe) in the area." Critical Landscape Factors: > "Undulating Topography: Mildly undulating topography as represented in this character unit by low drumlins, has the ability to

	both shelter and absorbs the visual impact of development. Firstly, the physical shielding of a built form within the lee of hill where it does not break the skyline renders it visually unobtrusive and reflective of landscape scale. Secondly, the dynamic and complex nature of undulating country provides fore, middle, and distant ground to a vista that helps to provide a realistic scale and visual containment not available in open country. ➤ <i>Shelter Vegetation: In a similar manner to undulating topography, shelter vegetation has a shielding and absorbing quality in landscape terms. It can provide a natural visual barrier and also adds to the complexity of a vista, breaking it up to provide scale and containment for built forms.</i>
Landscape Sensitivity to Wind Farm Development	Landscape sensitivity is discussed in Section 13.4.1.1.3 of Chapter 13. This LCU is located within Policy Area 4 (Drumlins and Inland Lowlands), which the <i>Landscape Appraisal of County Mayo</i> (LACM) designates as having the lowest potential (Medium) for wind farm developments when compared with the other Policy Areas, noting that “<i>with careful siting and good design, the significance and extent of impacts can be minimised to an acceptable level</i>”. As discussed in Section 13.4.1.1.4 of Chapter 13, all of the proposed turbines are located within an area classified as ‘<i>Tier 1- Preferred (cluster of turbines)</i>’ in the Renewable Energy Strategy (RES) for County Mayo, as is the majority of this LCU. There are only very few Vulnerable Features located within this LCU, none of which are located within the Proposed Wind Farm site itself. Overall, in consideration of the above noted classifications, designations and landscape characteristics, the sensitivity of this LCU to wind farm development is deemed to be Low.
Visibility of the Proposed Project from within the LCU	As indicated by the ZTV, there is primarily full theoretical visibility within 5km of the nearest turbine. Beyond 5km, the majority of the LCU has theoretical visibility of the proposed turbines with some large patches of no theoretical visibility located beyond 10km to the southeast. Actual on-the-ground visibility appraisals during site visits determined that there would be more limited visibility in parts of the LCU beyond 5km from the proposed turbines, where the relatively flat nature of the topography and intervening vegetation in the landscape limit views of the proposed turbines. Photomontage Viewpoints 03, 04, 06, 07, 10, 13, 14, and 18 are located within this LCA.
Cumulative Context	The existing Cloontoa and Ballykinava Wind Farms are located within this LCU, approx. 10km east from the proposed turbines.
Cumulative Landscape Effects	Cumulative Comparative ZTV shows stretches where both the proposed and cumulative turbines are theoretically visible. The introduction of the proposed turbines will give rise to some cumulative effects; however, any in-combination or sequential views that do occur will be intermittent and largely obscured by intervening vegetation within the flat landscape. Given the existing density of wind energy development in this LCU, and extent of the proposed turbines, cumulative landscape effects are anticipated from the addition of the Proposed Wind Farm within this LCU. However, the Cumulative Comparative ZTV indicates that the proposed turbines introduce only very few new areas from which wind energy would become visible for the first time.

Magnitude of Change	Magnitude = Moderate. Rationale: Physical changes to the physical fabric of the landscape will occur as a result of the Proposed Project, which will be primarily confined to the Site itself. The wider extent of this LCU, will remain unaffected. In terms of visibility, visibility will be most prominent to the immediate vicinity of the Site, with visibility rapidly diminishing with distance. On balance, the magnitude of change to this LCU deemed to be 'Moderate'. For the definition of this rating, refer to Section 1.7.4 Magnitude of Landscape Change in <i>Appendix 13-1: LVIA Methodology</i>.
Significance of Effect	Low × Moderate = Minor = 'Slight' (EPA, 2022) <i>'An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.'</i> Refer to Section 1.7.5 'Landscape Effects Assessment Matrix' in <i>Appendix 13-1: LVIA Methodology</i>.
Mitigation Factors	➤ The proposed turbines follow the siting and design recommendations for 'Hilly and Falt Farmland' Landscape Types as set out in the Guidelines (DoEHLG, 2006) and the Draft Guidelines (DoHPLG, 2019) within which this LCU is located in (see Key Characteristics). ➤ The proposed turbines and development infrastructure will only materially alter a very localised portion of this LCU. ➤ The majority of this LCU's land area is designated as 'Tier 1- Preferred (cluster of turbines)' for wind energy development by the RES in County Mayo, including the location of the proposed turbines. ➤ The Proposed Wind Farm site and its immediate surroundings are located within a landscape that has undergone a degree of human modification due to current land use practices such as agriculture, peat extraction, and commercial forestry, and is set back from any sensitive landscape receptors (Vulnerable Features). As such, the Proposed Wind Farm will not alter the physical fabric of any key vulnerable features within this LCU. ➤ The Proposed Grid Connection is entirely underground and thus will not affect key landscape character characteristics or have long-term effects;
Residual Landscape Effect (incl. mitigating factors)	Slight (EPA, 2022) <i>'An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.'</i>

1.1.2

LCU K - East Central Drumlin Spine

County Mayo LCU K: East-Central Drumlin Spine	
Distance from the site to Nearest/Furthest Area of LCU	At the closest point, this LCU is located approx. 250m north of the nearest proposed turbine (T07). The northern extent of the Site extends into this LCU, in which the proposed onsite 110kV substation will be located.
LCU Key Characteristics (CCDP Chapter 9, Landscape and Green Infrastructure, Section 9.4)	Description: <i>"This area is made up of glacial drumlins that are uniform at its western end near its transition with the distinct drumlins of Clew Bay. In the east, these become less uniform and severe, and the terrain merges into several sets of geologically distinct and isolated hills as the unit encapsulates the towns of Castlebar, Swinford, and Charlestown."</i> <i>The land cover is a mixture of bog/moorland, poor quality pasture and transitional woodland scrub with better quality pasture to the east and south."</i> Land Uses: <i>"This area is characterised by a mixed land use pattern. Peat bogs and agricultural lands with significant areas of natural vegetation and transitional woodland scrub. There are also significant areas where pasturelands represent a major land use. Charlestown, Castlebar and Swinford towns display the significance of urban settlement areas in this region of the County."</i> Critical Landscape Factors: ➤ <i>"Undulating Topography: Mildly undulating topography as represented in this character unit by low drumlins, has the ability to both shelter and absorb the visual impact of development. Firstly, the physical shielding of a built form within the lee of hill where it does not break the skyline renders it visually unobtrusive and reflective of landscape scale. Secondly, the dynamic and complex nature of undulating country provides fore, middle, and distant ground to a vista that helps to provide a realistic scale and visual containment not available in open country."</i> ➤ <i>Shelter Vegetation: In a similar manner to undulating topography, shelter vegetation has a shielding and absorbing quality in landscape terms. It can provide a natural visual barrier and also adds to the complexity of a vista, breaking it up to provide scale and containment for built forms."</i> ➤ <i>Prominent Ridge Lines: These occur as either primary ridgelines (visible only against the sky from any prospect) or secondary ridgelines (visible at least from some prospects below a distant primary ridge line). There are major primary ridgelines beyond the north-west boundary of this character unit, and it also contains some relatively low and isolated examples of primary and secondary ridge lines through its centre. Ridge lines perform the important roles of providing an area with its identity, acting as dominant landscape focal points, and defining the extent of visual catchments. As with other natural linear features such as shorelines it is important that development does not interrupt the integrity of primary ridgelines. Due to the dominating influence of ridgelines, in instances where penetration does occur, development can appear insubordinate to the landscape in which it sits."</i>

	➤ <i>Localised Lake Vistas: This character unit envelops a large part of Lough Conn, around the shores of which, several major roads pass. Due to the low-lying nature of lakeland environments such as this, low prospect vistas are available from the roads of the Lough and its shores. The main concern for natural linear features such as lakeshores, coastlines, and ridgelines is to avoid penetration by development that will interrupt and reduce the integrity of such elements. Given the low viewing points around the loughs, visual intrusion by development is likely to be enhanced.</i>
Landscape Sensitivity to a Wind Farm Development	This LCU is located within Policy Area 4, which the LACM designates as having the lowest potential (Medium) for wind farm developments when compared with the other Policy Areas. There are some designated Vulnerable Features located within this LCU, none of which are located within the Site itself. Many areas within this LCU are designated as either ‘Tier 1- Preferred (cluster of turbines)’, or ‘Tier 2 - Open to Consideration’. There are also two areas classified as ‘Existing Wind Farms’ within the RES, meaning that wind farm development was deemed acceptable within this LCU, despite the designated Vulnerable Features of skylines and ridges located in close proximity to these areas. Overall, in consideration of the above noted classifications, designations and landscape characteristics, the sensitivity of this LCU to wind farm development is deemed to be Low.
Visibility of the Proposed Project from within the LCU	There is primarily full theoretical visibility within 5km of the proposed turbines, with visibility decreasing to the north and east beyond 5km due to elevated landforms. Photomontage viewpoints 01, 02, 08, 09, 11, 15, 16, and 17 are located within this LCU.
Cumulative Context	The existing Cuillalea and Cuillalea Extension Wind Farms (approximately 10.1km to the north), Mace Upper Wind Farm (approximately 8km to the east), and Magheramore Wind Farm (approximately 11.6km to the east) are located within this LCU.
Cumulative Landscape Effects	As shown by the Cumulative Comparative ZTV, the vast majority of the area within this LCU, located within the LCA Study Area, has visibility of both the cumulative and proposed turbines. A large area of cumulative turbines only is visible beyond 10km to the north from the nearest proposed turbine. Some small pockets of proposed turbines only is visible within 5 km of the proposed turbines.
Magnitude of Change	Magnitude = Moderate. Rationale: Physical changes to the physical fabric of the landscape will occur as a result of the proposed 110kV onsite substation, which will be primarily confined to a very localised area of the entire LCU. The wider extent of this LCU, will remain unaffected. In terms of visibility, visibility of the proposed turbines will be most prominent to the immediate vicinity of the Site, with visibility rapidly diminishing with distance. On balance, the magnitude of change to this LCU deemed to be ‘Moderate’.

	For the definition of this rating, refer to Section 1.7.4 Magnitude of Landscape Change in <i>Appendix 13-1: LVIA Methodology</i> .
Significance of Effect	Low × Moderate = Minor = ‘Slight’ (EPA, 2022) <i>‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.’</i> Refer to Section 1.7.5 ‘Landscape Effects Assessment Matrix’ in <i>Appendix 13-1: LVIA Methodology</i>.
Mitigation Factors	➤ The proposed development infrastructure will only materially alter a very localised portion of this LCU. ➤ The majority of the LCU area designated for wind farm development is classified as ‘Tier 1- Preferred (cluster of turbines)’, Tier 2 - Open to Consideration’, as well as ‘Existing Wind’ by the RES. ➤ The Proposed Wind Farm will not materially alter the physical fabric of any of the key sensitive landscape features of this LCU (Vulnerable Features). ➤ Visibility appraisals conducted during site visits, determined that visibility within this LCU is far less than indicated by the ZTV, as visual screening provided by vegetation will limit visibility of the proposed turbines. ➤ The ‘shelter vegetation’ described above in the Critical Landscape Factors will provide additional vegetative screening of the proposed turbines from large parts of this LCU, especially beyond 5km.
Residual Landscape Effect (incl. mitigating factors)	Slight (EPA, 2022) <i>‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.’</i>

1.1.3

LCU M – Lakeland Drumlins

County Mayo LCU M: Lakeland Drumlins	
Distance from the site to Nearest/ Furthest Area of LCU	At the closest point, this LCA is located approximately 5.2km south-west of the nearest proposed turbine (T1).
LCA Key Characteristics	Description: “This is an area of low-lying drumlins and wetland associated with Lough’s Mask, Carra, and Corrib. There is a mixture of wetland land cover around the lakeshores and patches of forestry and moorland to the north and east. A dramatic backdrop of the Partry Mountains falling steeply to the shores of Lough Mask occurs to the west. The eastern parts of this unit appears similar to the pastoral landscape of the unit to the east, however, the overriding feature is the proximity and influence of the Loughs.” Land Uses: “Pasturelands are dominant on the landscape with livestock rearing as the main land use in the area. However, significant areas of conifer forests and some mixed forests can also be found. On the east shores of Lough Mask, moors and heathlands reveal large areas of unused land.”

	Critical Landscape Factors: ➤ <i>“Undulating Topography: Mildly undulating topography as represented in this character unit by low drumlins, has the ability to both shelter and absorbs the visual impact of development. Firstly, the physical shielding of a built form within the lee of hill where it does not break the skyline renders it visually unobtrusive and reflective of landscape scale. Secondly, the dynamic and complex nature of undulating country provides fore, middle, and distant ground to a vista that helps to provide a realistic scale and visual containment not available in open country.</i> ➤ <i>Shelter Vegetation: In a similar manner to undulating topography, shelter vegetation has a shielding and absorbing quality in landscape terms. It can provide a natural visual barrier and also adds to the complexity of a vista, breaking it up to provide scale and containment for built forms.</i> ➤ <i>Prominent Ridge Lines: These occur as either primary ridgelines (visible only against the sky from any prospect) or secondary ridgelines (visible at least from some prospects below a distant primary ridge line). There are major primary ridgelines looming over the western boundary of this character unit, associated with the Partry Mountains. Ridge lines perform the important roles of providing an area with its identity, acting as dominant landscape focal points, and defining the extent of visual catchments. As with other natural linear features such as shorelines it is important that development does not interrupt the integrity of primary ridgelines. Due to the dominating influence of ridgelines, in instances where penetration does occur, development can appear insubordinate to the landscape in which it sits.</i> ➤ <i>Localised Lake Vistas: This character unit envelopes large parts of Loughs Cara, Mask and Corrib, around the shores of which, several significant roads pass. Due to the low-lying nature of lakeland environments such as this, low prospect vistas are present from the roads of the Loughs and their shores. The main concern for natural linear features such as lakeshores, coastlines, and ridgelines is to avoid penetration by development that will interrupt and reduce the integrity of such elements. Given the low viewing points around the loughs, visual intrusion by development is likely to be enhanced.”</i>
Landscape Sensitivity to a Wind Farm Development	This LCU is partially located within Policy Area 4 (and partially within Sub-Policy Area 4a) of the LACM. Policy Area 4 is identified as having the lowest potential (Medium) for wind farm development when compared with the other Policy Areas. There are also a number of designated Vulnerable Landscape Features within this LCU, including the ridgelines of the Partry Mountains, as well as Lough Carra and Lough Mask. Notwithstanding these sensitivities, areas within this LCU are designated as either ‘Tier 1 - Preferred (cluster of turbines)’ or ‘Tier 2 – Open to Consideration’ for wind energy development.

	Overall, in consideration of the above noted classifications, designations and landscape characteristics, the sensitivity of this LCU to wind farm development is deemed to be Medium .
Visibility of the Proposed Project from within the LCU	There is primarily full theoretical visibility to the southern extent of this LCU with the LCA Study Area, with visibility decreasing to the west due to the drumlin landscape. Photomontage viewpoints 05, 12, and 19 are located within this LCU.
Cumulative Context	There are no other wind farms located within this LCU.
Cumulative Landscape Effects	While there are currently no other wind farms located within this LCU, the Cumulative Comparative ZTV indicates predominantly full theoretical visibility of both the proposed and cumulative turbines, with very small areas of visibility of only the proposed turbines.
Magnitude of Change	Magnitude = Slight. Rationale: The Proposed Wind Farm does not materially alter the physical fabric of this LCU. In terms of visibility, where visibility does occur, the proposed turbines will be perceived as small-scale elements in the distant background relative to the landscape. As a result, the visibility of the proposed turbines in the distant landscape would result in only low-level changes to the overall landscape character and visual aesthetics of this LCU. Therefore, the Proposed Project is considered to have an overall Slight effect on the overall landscape character of this LCU. For the definition of this rating, refer to Section 1.7.4 "Magnitude of Landscape Change" in <i>Appendix 13-1: LVIA Methodology</i> .
Significance of Effect	Medium × Slight = Minor = 'Slight' (EPA, 2022) <i>'An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.'</i> Refer to Section 1.7.5 'Landscape Effects Assessment Matrix' in <i>Appendix 13-1: LVIA Methodology</i> .
Mitigation Factors	➤ The Proposed Project will not significantly impact upon any of the key scenic or landscape sensitivities of this LCU. ➤ The 'undulating topography' created by the drumlin landscape within the LCA Study Area and described above in the Critical Landscape Factors creates extensive areas of no visibility outside 5km, and all of this LCU is beyond 5km from the proposed turbines. ➤ Large parts of this LCU are located outside of the LCA Study Area for effects on landscape character. ➤ The 'shelter vegetation' described above in the Critical Landscape Factors will provide additional vegetative screening of the proposed turbines from large parts of this LCU.

Residual Landscape Effect (incl. mitigating factors)	Not Significant (EPA, 2022) <i>'An effect which causes noticeable changes in the character of the environment but without significant consequences.'</i>
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