

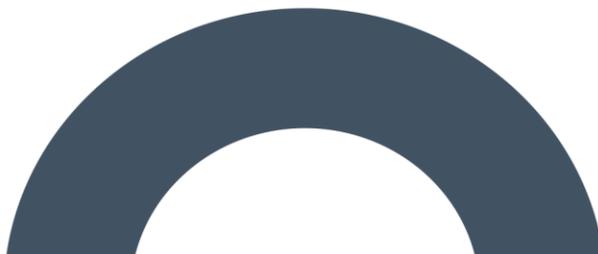


APPENDIX 12-2

LCA ASSESSMENT TABLES

Appendix 12-2 LCA Assessment Tables

Umma More Renewable
Energy Development, Co.
Westmeath





DOCUMENT DETAILS

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1. LANDSCAPE CHARACTER ASSESSMENT TABLES

1.1 County Westmeath

Westmeath LCA 7 - Western Lowlands	
Distance from site to Nearest/Furthest Area of LCA	The proposed turbines are located within this LCA. The vast majority of the LCA falls within the LVIA Study Area and at its furthest point from the Wind Farm Site, the LCA extends 17.5 km south-west of turbine T9. The proposed Grid Connection route follows the local road network in a south-easterly direction from the Wind Farm Site, traversing the south-eastern portion of this LCA.
LCA Key Characteristics (Chapter 13 of the Westmeath County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ <i>“The character of this area contains a variety of landscape features including eskers, lakes and bogs.</i> ➤ <i>This landscape is generally low-lying but is characterised by a gently undulating topography, particularly around Mount Temple and to the northwest of Moate.</i> ➤ <i>Visual containment in the landscape is created by elevated areas and glacial kames, irregular ridges or mounds of gravel deposited by melting glaciers feature at intervals. Low-lying areas, however, are generally contained visually due to high quality, species rich hedges that dominate field boundaries in the area, limiting the extent of views across the landscape.</i> ➤ <i>This area includes the settlements of Moyvore, Ballymore, Mount Temple, Moate and Ballinahown and is bounded to the east by the change in topography that characterises the South-Central Hills Character Area at Ballymore and west of Rosemount.”</i>
Landscape Sensitivity to Wind Farm Development	<p>This LCA was previously designated as having the most capacity (‘Medium Capacity’) for wind energy development in the Westmeath County Development Plan (2014-2020) that was adopted on the 18th of February 2014 as well as being designate ‘Medium’ Capacity for wind energy in the 2021-2027 Draft Westmeath County Development Plan.</p> <p>In both the instance of the 2014-2020 development plan and the Draft 2021-2027 plan, this ‘Medium Capacity’ designation was changed to ‘Low Capacity’; by way of variation no. 1 to the Development Plan (2014-2020) on 23rd September 2016; as well as through the adoption of the current Westmeath County Development Plan (2021-2027). No rationale has been given for the change in wind energy capacity status of LCA 7 and the omission of LCAs with any Wind Energy Capacity higher than ‘Low’.</p> <p>There are no County Westmeath High Amenity Areas located within this LCA. The LCA does not comprise any unique landscape features of county or national interest. In consideration of these points, the LCA is deemed to be Low Sensitivity.</p>
Visibility of the proposed turbines within the LCA	The ZTV, in Figure 12-1 in Chapter 12, indicates that the proposed turbines will be visible from large parts of this LCA, although theoretical visibility is limited within areas to the south-west. On-site appraisals

	<p>determined that there would be limited actual visibility in areas of the LCA beyond 5km from the Wind Farm Site. Visual containment attributed to localised topographical undulations and vegetation screening will limit visibility from many parts of this LCA. The Grid Connection route passes through this LCA. The route will be underground and landscape effects will be limited to the construction phase.</p> <p>11 No. Photomontage Viewpoints included in the EIAR Volume 2: Photomontage Booklet are located in this LCA (VP01, VP02, VP04, VP07, VP08, VP09, VP10, VP11, VP12, VP14 and VP15), as well as 10 No viewpoint locations of Photowire visualisations (early-stage photomontages) included in Appendix 12-5.</p>
Cumulative Baseline	<p>There are no existing or permitted turbines in this LCA.</p> <p>The proposed Lemanaghan turbines are likely to be located to the south from this LCA (3.5km from the closest part of the LCA). The proposed Kepak turbine is likely to be located 9.9km southeast of this LCA. The proposed Derryadd turbines are likely to be located to the north of this LCA (10km from the closest part of the LCA). The cumulative ZTV on Figure 12-18 within Section 12.6 of Chapter 12 indicates that the proposed Kepak, Lemanaghan and Derryadd turbines are theoretically visible from locations within this LCA. However, visibility appraisals based upon site visits and production of photomontages have determined that actual visibility of the proposed Kepak, Lemanaghan and Derryadd wind farms is likely to be very limited, and only likely to occur from isolated areas of high elevation within this LCA.</p>
Cumulative Landscape Effects	<p>No cumulative landscape effects occur with other existing or permitted wind energy developments.</p> <p>There is a very small likelihood that there is intervisibility between the Proposed Development turbines and the proposed Kepak turbine, proposed Lemanaghan turbines or proposed Derryadd turbines within this LCA. Therefore, there is unlikely to be any cumulative effects on the landscape and character of this LCA.</p>
Magnitude of Change (Definition from Section 1.4.2 of Methodology Appendix 12-1)	<p>Moderate: <i>“A more limited loss of or change to landscape features over a medium extent which will result in some change to landscape features and aesthetics. Could include the addition of some new uncharacteristic features or elements that would lead to the potential for change in landscape character in a localised area or part of a landscape character area. Would include moderate effects on the overall landscape character that do not affect key characteristics.”</i></p>
Significance of Effect	<p>Low x Moderate = Minor = Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities</p>
Mitigating Factors	<ul style="list-style-type: none"> ➤ The proposed turbines are not located in close proximity to any sensitive landscape features. ➤ As noted in the LCA descriptions (WCDP) the landscape is visually contained by the hedgerows and vegetated field boundaries which limits visibility across the landscape, greatly reducing the spatial extent of the area within this LCA where the proposed turbines will be visible.

Residual Effect (incl. mitigating factors)	Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
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Westmeath LCA 6 - Lough Ree/Shannon Corridor	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 6.4 km west of the nearest proposed turbine (T4). At its furthest point the LCA extends 17.9km west of T4. The majority of this LCA is located within the LVIA Study Area for assessment of effects on landscape character (within 15km from the proposed turbines).
LCA Key Characteristics (Chapter 13 of the Westmeath County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ <i>This area includes Lough Ree, the Shannon corridor both north and south of Athlone and villages of Ballykeeran, Glasson and Tubberclare are also included.</i> ➤ <i>Areas of pastureland are scattered throughout the remainder of the area along with small patches of inland marshes, coniferous forestry and other agricultural uses.</i> ➤ <i>A significant area of intact bog remains to the southeast of Athlone and worked out peatland areas are located to the north and south of the Character Area, adjacent to the callows and Lough Ree.</i> ➤ <i>The area has significant conservation status, as SPA, SAC and NHA are all present therein.</i> ➤ <i>The Shannon and Lough Ree are important in terms of their recreational and amenity value, as well as their natural heritage importance, thus the quality of these assets must be protected.</i> ➤ <i>As development pressure increases around the lakeshore and floodplain, the risk of landscape deterioration also increases.</i>
Landscape Sensitivity to Wind Farm Development	<i>Section 13.20</i> (Chapter 13) of the WCDP describes the County Westmeath Lough Ree High Amenity Area, which occupies a large portion of this LCA. Considering the ecological, recreational and tourism value of this landscape receptor, the sensitivity of this LCA to wind farm development is deemed to be High .
Visibility of the proposed turbines within the LCA	The ZTV indicates large patches of full theoretical visibility (48.96%) as well as large patches of no theoretical visibility (37.31%). Actual visibility was determined to be very limited from within this LCA, based on site visits. Visibility of the proposed turbines is only likely to occur from localised areas of high elevation. 2 No. Photowires (early-stage photomontages) were captured in this LCA, AltVP-O and AltVP-S are seen within Appendix 12-5 and show that views of the proposed turbines are limited. It is very unlikely that there will be views of the proposed turbines in conjunction with landscape features such as Lough Ree or the Shannon River Corridor within this LCA.
Cumulative Baseline	There are no existing or permitted turbines in this LCA. The proposed Derryadd turbines are likely to be located 8.1km from the closest part of the LCA. There are likely to be views of the proposed Derryadd turbines from the northern extent of this LCA. The proposed Lemanaghan turbines are likely to be located to the southeast from this LCA (9.8km from the closest part of the LCA) and will be theoretically

	visible from this LCA, although actual visibility is likely to be very limited. The proposed Kepak turbine is likely to be located 26km east of this LCA at its closest point, this proposed turbine will not be visible from this LCA.
Cumulative Landscape Effects	No cumulative landscape effects occur with other existing or permitted wind energy developments. There is a very small likelihood that there is intervisibility between the proposed turbines and the proposed Lemanaghan turbines or the proposed Derryadd turbines within this LCA. Therefore, there is unlikely to be any cumulative effects on the landscape and character of this LCA.
Magnitude of Change <i>(Definition from Section 1.4.2 of Methodology Appendix 12-1)</i>	Negligible: “A change affecting smaller areas of landscape character including the loss of some landscape elements or the addition of features or elements which are either of low value or hardly noticeable.”
Significance of Effect	High x Negligible = Minor = Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Mitigating Factors	➤ Valuable scenic amenity in this LCA is directed to the west, towards sensitive landscape features such as Lough Ree and the Shannon Corridor which are located at the western periphery of this LCA. At its closest point, the Wind Farm Site is located 6.4 km east of this LCA in the opposite direction of these sensitive landscape receptors (Lough Ree and Shannon Corridor). Therefore, the proposed turbines are likely to have no impact upon the visual aesthetic and character of the sensitive features in this LCA.
Residual Effect (incl. mitigating factors)	Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.

Westmeath LCA 8 – South Central Hills	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 2.4 km east of the nearest proposed turbine (T7). At its furthest point the LCA extends 18km east of T7.
LCA Key Characteristics (Chapter 13 of the Westmeath County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ “This Character Area includes the hilly pasture land that exists to the east of Ballymore, stretching almost as far as Lough Ennell, north as far as the Royal Canal Corridor and is bounded to the south by an area predominantly characterised by esker systems. ➤ The area is typified by smooth, gentle hills and undulating pastures, with occasional northwest, south-east ridges. ➤ The highest point within this area is 200 metres, which is at Knockastia, Coolatore, a volcanic outcrop just south of the Hill of Uisneach, which also has the steepest slopes in the Landscape Character area. This hilltop allows panoramic views across neighbouring counties and the approach to the hill, particularly from the Ballymore Road offers impressive opportunities to appreciate its scale.

	<ul style="list-style-type: none"> ➤ <i>The Character Area also includes part of a system of eskers at Streamstown, which are displayed though a series of low ridges traversing the landscape in a northerly direction, resulting in a rural feel to these local roads as the land rises on either side.</i> ➤ <i>The area contains a number of small villages and clustered settlements but has remained quite rural in nature.”</i>
Landscape Sensitivity to Wind Farm Development	<p>There are no County Westmeath High Amenity Areas located within this LCA. As noted above, the hill at Knockastia is a landscape feature of local prominence and its peak is the origin of a designated scenic view of local importance (county Westmeath Scenic View No. 9). The LCA does not comprise any other unique landscape features of county or national interest. In consideration of these points, the LCA is deemed to be of Medium Sensitivity.</p>
Visibility of the proposed turbines within the LCA	<p>The ZTV indicates no theoretical visibility across a large proportion of the LCA (52%). Most theoretical visibility occurs in the north-west of the LCA, as well as on elevated hilltops. On-site appraisals and production of photomontages determined that actual visibility of turbines occurs on the elevated west facing slopes of the lowland hills to the very west of the LCA, as well as visibility of turbines from the most elevated peaks. There will be full visibility from the scenic view at Knockastia (See Photomontage Viewpoint 21). However, actual visibility throughout the remainder of the LCA is far less than indicated by the ZTV due to localised screening factors. Actual visibility will be very limited in all low-lying parts of this LCA.</p> <p>VP03, VP05, VP06 and VP16, as shown in the EIAR Volume 2: Photomontage Booklet, are located in this LCA. AltVP-E, AltVP-D and AltVP-F are Photowire visualisations shown in Appendix 12-5, showing limited visibility of the proposed turbines within this LCA.</p>
Cumulative Baseline	<p>There are no existing or permitted turbines in this LCA.</p> <p>The proposed Lemanaghan turbines are likely to be located to the southwest from this LCA (14.7km from the closest part of the LCA). The proposed Derryadd turbines are likely to be located to the northwest of this LCA (19.2km from the closest part of the LCA). The cumulative ZTV on Figure 12-18 within Section 12.6 of Chapter 12 indicates some theoretical visibility of the proposed Kepak turbine and the Lemanaghan turbines and the proposed Derryadd turbines in this LCA, from locations within 10km of the Wind Farm Site. Actual visibility of these turbines is likely to be very limited.</p>
Cumulative Landscape Effects	<p>No cumulative landscape effects occur with other existing or permitted wind energy developments.</p> <p>It is likely that the Proposed Development turbines will be viewed in combination with the proposed Kepak, Lemanaghan and Derryadd turbines from a few elevated vantage points (e.g. VP21 Knockastia) in this LCA. Instances where this occurs are not likely to be a common occurrence in this LCA and there are no changes to the character of the LCA itself. Due to the substantial separation and set back distances, the proposed Kepak turbine and Derryadd and Lemanaghan turbines would be unlikely to cause any significant cumulative effects on the character of this LCA when potentially viewed in combination with the Proposed Development turbines.</p>

Magnitude of Change (Definition from Section 1.4.2 of Methodology Appendix 12-1)	Slight: “The loss of or change to landscape features of limited extent, or changes to landscape character in smaller areas. Changes would not affect key characteristics. The addition of any new features or elements to the landscape would only result in low-level changes to the overall aesthetics of the landscapes. Changes to the landscape are more evident at a local level and not over a wide geographical area.”
Significance of Effect	Medium x Slight = Minor = Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Mitigating Factors	<ul style="list-style-type: none"> ➤ Vast areas of this LCA are not likely to have any visibility of the proposed turbines. ➤ On the basis of site visits conducted, it is determined that actual visibility of the proposed turbines and effects on landscape character are only likely to occur from localised areas of high elevation.
Residual Effect (incl. mitigating factors)	Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.

Westmeath LCA 9 – Hill of Uisneach	
Distance from site to Nearest/Furthest Area of LCA	<p>At its closest point, this LCA is located approximately 7.3 km east of the nearest proposed turbine (T7). At its furthest point the LCA extends 10.4km east of T7. All of this LCA is located within the 15km LVIA Study Area for assessment of Landscape Character.</p> <p>As noted in Chapter 12 (Section 12.1.6), no access was permitted to the Hill of Uisneach. In light of these circumstances, tools such as ZTV mapping, aerial imagery and online imagery (e.g., Google Street View imagery) were used to assess the likely impacts of the proposed turbines on the landscape character of the Hill of Uisneach. Also, MKO have produced a ‘Rendered Wireline’ to assess visual effects from the hill – See VP 16 in the EIAR Volume 2: Photomontage Booklet. Viewpoint 16 is a useful tool for comprehending the likely impacts of the proposed turbines on the character of the Hill of Uisneach LCA.</p>
LCA Key Characteristics (Chapter 13 of the Westmeath County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ “The Hill of Uisneach, a nationally significant archaeological landscape, is located 14.5 kilometres west of Mullingar, north of the Mullingar to Ballymore Road. It has a central place, historically, geographically and metaphorically in the annals of Ireland and is internationally considered to be an important cultural landscape. ➤ The Character Area includes the area surrounding the hill, from Killare and south to include the cultural landscape of features including the deserted ‘famine village’ and also incorporating a number of recorded monuments and the zone of archaeological potential around Uisneach. ➤ The land in the vicinity is in agricultural use and land cover on, and surrounding the Hill is predominantly that of pastureland with species rich hedges acting as field boundaries.

	<p>➤ <i>Traditionally Uisneach was the epicentre of Ireland where the five provinces met, and legend has it that Ireland was divided from this point in ancient times. The large stone on the side of the hill is known as The Stone of Divisions or ‘Ail na Mireann’. This stone is said to be at the exact centre of Ireland and the boundary lines of the provinces were said to meet here.”</i></p>
Landscape Sensitivity to Wind Farm Development	<p>All of this LCA is designated as a County Westmeath High Amenity Area in recognition of the Hill of Uisneach as a site of archaeological and cultural significance at both county and national level. The panoramic views from the top of the hill are also designated as protected views. The LCA is deemed to be of Very High Sensitivity.</p>
Visibility of the proposed turbines within the LCA	<p>The ZTV indicates one area of full theoretical visibility upon the northern, western and southern slope of the Hill of Uisneach. There is likely to be visibility of the proposed turbines from the most elevated locations on the Hill. From the use of aerial maps and elevation models during the baseline mapping exercise, the extent of actual visibility within the LCA and upon the Hill is determined to be far less than is indicated on the ZTV due to extensive mature woodland and localised undulations in the topography.</p> <p>As mentioned above and in Section 12.1.6 of Chapter 12, due to access constraints (refusal of access to the Hill by landowner) no visibility appraisal was conducted upon the hill and no photomontages could be captured within this LCA. A Rendered Wireline of the view from the Hill of Uisneach towards the proposed turbines has been created to enable the assessment of the potential impacts from this location (Viewpoint 16 in the EIAR Volume 2: Photomontage Booklet). Whilst not as ideal as a photomontage view from this location, when viewed in combination with online imagery (e.g., Google Street View imagery), the Rendered Wireline illustrates how the proposed turbines will be received within open panoramic views originating in this LCA. Viewpoint 16 illustrates the scale and form of the proposed turbines within the expansive midland landscape visible beyond this LCA. The proposed turbines are seen in the background of landscape views within this Rendered Wireline and do not seriously detract from the setting of the LCA and do not directly interfere with views of the LCA itself. Section 12.7.3.1.2 of Chapter 12 shows wireframe generated from monuments of significant cultural heritage value such as the Ail na Mireann (Stone of Divisions). The imagery shows that whilst the proposed turbines will be visible, there will be little impact on the immediate landscape setting of these valuable monuments.</p>
Cumulative Baseline	<p>No existing or permitted turbines are located within this LCA.</p> <p>The proposed Kepak turbine is located 18.3km southeast in Westmeath LCA 11. The proposed Lemanaghan turbines are likely to be located to the southwest from this LCA (20km from the closest part of the LCA). The proposed Derryadd turbines are likely to be located to the northwest of this LCA (23km from the closest part of the LCA). The comparative cumulative ZTV on Figure 12-18 within section 12.6 of Chapter 12 shows that the proposed Lemanaghan and Derryadd turbines are likely to be theoretically visible in parts to the north of this LCA (20km from the closest part of the LCA).</p>
Cumulative Landscape Effects	<p>No cumulative landscape effects occur with other existing or permitted wind energy developments.</p>

	<p>There is a likelihood that the Proposed Development turbines may be viewed in combination with the proposed Lemanaghan and Derryadd turbines from a from the most elevated vantage points within this LCA. The proposed Kepak turbine may be visible in succession with the Proposed Development turbines from areas of high elevation. However, due to the substantial separation and set back distances of these proposed turbines, from the Proposed Development turbines and this LCA, these proposed developments would be unlikely to cause any significant cumulative effects on the character of this LCA.</p>
<p>Magnitude of Change (Definition from Section 1.4.2 of Methodology Appendix 12-1)</p>	<p>Slight <i>“The loss of or change to landscape features of limited extent, or changes to landscape character in smaller areas. Changes would not affect key characteristics. The addition of any new features or elements to the landscape would only result in low-level changes to the overall aesthetics of the landscapes. Changes to the landscape are more evident at a local level and not over a wide geographical area. The effects could potentially be medium to short term and/or reversible.”</i></p>
<p>Significance of Effect</p>	<p>Very High x Slight = Moderate = Significant (EPA, 2022) An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.</p>
<p>Mitigating Factors</p>	<ul style="list-style-type: none"> ➤ The proposed turbines and development infrastructure will not materially alter this LCA. Landscape effects only relate to perceptual effects on the character of the LCA. ➤ A landscape of highly vegetated and undulating farmland provides a substantial physical buffer, covering a distance of approximately 8 km between the LCA and the Wind Farm Site. ➤ The proposed turbines will not alter the immediate setting, appearance and context of monuments on the Hill of Uisneach. For more information including visual impact assessments from monuments on the hill, see Section 12.7.2.4 of Chapter 12 as well as assessments of monuments on the hill included in Chapter 13 – <i>Cultural Heritage</i>. ➤ Visibility is only likely to occur in elevated, localised areas beyond 8 km from the proposed turbines where any potential effects on landscape character are mitigated by distance and separation, this is evidenced in the Rendered Wireline provided for VP16 in the EIAR Volume 2: Photomontage Booklet. ➤ The proposed turbines will comprise a very small portion of the long ranging and expansive landscape views from this LCA. ➤ The hill has no specific cultural association with the landscape of the Wind Farm Site and there is no discernible connectivity between the Hill of Uisneach and any heritage monuments within the EIAR Site Boundary. ➤ The proposed turbines do not interfere with any visual connectivity between the Hill of Uisneach and other important heritage sites of prominence in the area. ➤ Figure 12-33 in Section 12.7.3.2.4 shows a ZTV focussed on the Hill of Uisneach showing no or partial theoretical visibility at the north and eastern side of the Hill and this LCA.
<p>Residual Effect (incl. mitigating factors)</p>	<p>Moderate (EPA, 2022) An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends</p>

Westmeath LCA 11 – South Westmeath Eskers	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 8.3 km south-east of the nearest proposed turbine (T9). At its furthest point the LCA extends 24.8km southeast of T9. The proposed Grid Connection traverses the south-western portion of this LCA.
LCA Key Characteristics (Chapter 13 of the Westmeath County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ <i>“This landscape type occupies the southernmost area of the County and is distinguished by the prevalence of esker ridges.</i> ➤ <i>The area extends from Castletown-Geoghegan to Ballinagore, Rahugh and Horseleap.</i> ➤ <i>The area is bisected by the former N6 and the M6. Apart from the N6/M6 and the Ballynagore - Kilbeggan road, the area is traversed by a network of tertiary roads which in places run parallel to the esker ridges and create an enclosed and intimate landscape.”</i>
Landscape Sensitivity to Wind Farm Development	Although there is geological value associated with this LCA, there are no County Westmeath High Amenity Areas located within the LCA. The LCA does not comprise any unique landscape features of county or national interest or any unique aesthetic qualities. In consideration of these points, the LCA is deemed to be of Medium Sensitivity.
Visibility of the proposed turbines within the LCA	<p>The ZTV indicates a large distribution of partial theoretical visibility, however, actual visibility of the proposed turbines is very limited within this low lying and enclosed midland landscape (as noted in the LCA description).</p> <p>The Grid Connection route passes through this LCA. The route will be underground and landscape effects will be limited to the construction phase.</p>
Cumulative Baseline	<p>No existing or permitted wind turbines are located within this LCA and the LVIA Study Area.</p> <p>The proposed Kepak Turbine is located within this LCA and the proposed Lemanaghan turbines are likely to be located approximately 12km west of this LCA at its closest point.</p>
Cumulative Landscape Effects	<p>No cumulative landscape effects occur with other existing or permitted wind energy developments.</p> <p>The cumulative ZTV on Figure 12-18 within Section 12.6 of the Chapter 12 shows likely theoretical visibility of the proposed Kepak turbine and Lemanaghan turbines in combination with the Proposed Development turbines. In reality, site visits determined that it is very unlikely that these proposed turbines will be viewed in combination with the Proposed Development turbines, and there are not likely to be any cumulative impacts on this LCA.</p>
Magnitude of Change <i>(Definition from Section 1.4.2 of Methodology Appendix 12-1)</i>	<p>Negligible: <i>“A change affecting smaller areas of landscape character including the loss of some landscape elements or the addition of features or elements which are either of low value or hardly noticeable.”</i></p> <p>Due to the limited visibility of the proposed turbines, changes to the</p>

	landscape are temporary, limited to the construction phase where the proposed Grid Connection will be installed in this LCA.
Significance of Effect	Medium x Negligible = Minor/Negligible = Not Significant (EPA, 2022) An effect which causes noticeable changes in the character of the environment but without significant consequences.
Mitigating Factors	<ul style="list-style-type: none"> ➤ Visibility of the proposed turbines within this LCA is only likely to occur in elevated, localised areas beyond 8 km from the Wind Farm Site where any potential effects on landscape character are mitigated by distance.
Residual Effect (incl. mitigating factors)	Not Significant (EPA, 2022) An effect which causes noticeable changes in the character of the environment but without significant consequences.

1.2

County Longford

Longford LCU 3 – Shannon Basin/Lough Ree	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 8.4 km west of the nearest proposed turbine (T1). At its furthest point the LCA extends 28km northwest of proposed turbine T1.
LCA Key Characteristics (Chapter 14 of the Longford County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ <i>“This unit has large amounts of water cover with inland marshes, bogland and tracts of deciduous forestry in the northern section around Lough Forbes. Land cover becomes less diverse travelling south of Lanesborough on the western shores of Lough Ree, with poorly drained agricultural land forming the majority of the landcover in the area.</i> ➤ <i>Lough Ree is interspersed with several small, uninhabited islands and the predominantly flat landscape provides for panoramic vistas across the lake at numerous locations. Small hills such as those at Newtowncashel, Cullentra and Rathcline (none of which break the 90m contour line) appear much larger in this context and act as punctuation marks in otherwise homogenous topography. The area around Lough Forbes is relatively inaccessible and visibility limited due to extensive afforestation.</i> ➤ <i>The only significant settlement in the unit is Newtowncashel, a small village located in an elevated position commanding extensive views over the lake.”</i>
Landscape Sensitivity to Wind Farm Development	<p>For LCU 3, Chapter 14 of the LCDP reports <i>“The sensitivity of the landscapes in this unit range from MEDIUM - along the southeastern border of the unit - to HIGH sensitivity - along the shores of the lake, islands, the riverbanks, and in the vicinity of the Aquifer.”</i></p> <p>This LCA has been given a High sensitivity rating on account of its visual sensitivity on the shores of Lough Ree that occupy the area of this LCA within the Study Area for Landscape Character Assessment (15km).</p>

Visibility of the proposed turbines within the LCA	<p>Although the ZTV indicates a large distribution of full theoretical visibility, actual visibility in the direction of the Wind Farm Site is limited within this highly vegetated landscape enclosing Lough Ree (as noted in the LCA description). The proposed turbines are only likely to be visible from within this LCA at a distance greater than 15km (beyond the LVIA Study Area for assessment of landscape character) where elevated vantage points permit views across Lough Ree in a south-easterly direction, as shown by AltVP-T in Appendix 12-5.</p>
Cumulative Baseline	<p>No other existing, permitted or proposed turbines exist in this LCA and the LVIA Study Area. The proposed Derryadd turbines are likely to be visible from areas within this LCA (6.3km from the closest part of the LCA within the Study Area for Landscape Character Assessment (15km)). The proposed Lemanaghan turbines are likely to be located approximately 25km south of this LCA at its closest point. The proposed Kepak turbine is likely to be located 30km southeast from this LCA. Both the proposed Kepak turbine and proposed Lemanaghan turbines are not likely to be visible from any locations in this LCA.</p>
Cumulative Landscape Effects	<p>No cumulative landscape effects occur with other existing or permitted wind energy developments.</p> <p>It is likely that there are limited instances where the Proposed Development turbines will be viewed in combination with the proposed Derryadd turbines. Considering that there will be substantial distances between the Proposed Development turbines and the proposed Derryadd Wind Farm, no significant cumulative effects upon landscape character are likely to occur.</p>
Magnitude of Change <i>(Definition from Section 1.4.2 of Methodology Appendix 12-1)</i>	<p>Negligible: <i>“A change affecting smaller areas of landscape character including the loss of some landscape elements or the addition of features or elements which are either of low value or hardly noticeable.”</i></p>
Significance of Effect	<p>High x Negligible = Minor = Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities</p>
Mitigating Factors	<ul style="list-style-type: none"> ➤ The Proposed Development will have no impact on the immediate setting of Lough Ree and areas of high amenity value surrounding the shore of the lake. ➤ The sensitive scenic amenity, such as the Longford Scenic Routes, in this LCA are located beyond a distance of 15km from the proposed turbines, where it is deemed that effects upon landscape character are not deemed to be significant. ➤ Visibility of the proposed turbines from within this LCA is only likely to occur in elevated, localised areas beyond 8 km from the proposed turbines where any potential effects on landscape character are mitigated by distance.
Residual Effect (incl. mitigating factors)	<p>Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities</p>

Longford LCU 5 - Inny Basin	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 5.4 km north of the nearest proposed turbine (T1). At its furthest point the LCA extends 37.2km north of T1.
LCA Key Characteristics (Chapter 14 of the Longford County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ <i>“The landcover in this area is dominated by peatlands and mixed woodlands interspersed with pastures of varying quality.</i> ➤ <i>The area maintains a relatively flat and level topography.</i> ➤ <i>The Inny dominates the drainage patten of the area. Flows tend to be sluggish given the nature of the landcover and topography. There is one seasonal lake to the north of the region, however visibility of the lake and the River from the public road is poor and awareness of these features low, with the possible exceptions of locals and seasoned anglers.</i> ➤ <i>There are two designated settlements in this unit, one in the south at Forgnev and the other in the North at Lisryan. Settlement is greatest in the areas outlying Legan and Edgeworthstown, while Lisryan in particular has experienced some growth in recent times.”</i>
Landscape Sensitivity to Wind Farm Development	For LCU 5, Annex 4 of the LCDP reports <i>“The sensitivity of the landscapes in this unit are generally Low. Potential areas of medium to high sensitivity exist in the vicinity of protected woodlands, riverbanks”</i> . As noted, the Landscape is of low sensitivity and although woodland and the riverbanks are landscape receptors of value, there are no sensitive landscape features of county or national interest located in this LCA and the LVIA Study Area for Assessment of Landscape Character (15km). On balance, sensitivity of this LCA is considered Low .
Visibility of the proposed turbines within the LCA	Although the ZTV indicates a large distribution of full theoretical visibility, actual visibility of the proposed turbines are very limited as the landcover is dominated by woodlands (as noted in the LCA description).
Cumulative Baseline	No other existing, permitted turbines exist in this LCA within the LVIA Study Area. The proposed Derryadd turbines are potentially theoretically visible from areas within this LCA (9.5km from the closest part of the LCA), although they are unlikely to be visible in this flat vegetated landscape.
Cumulative Landscape Effects	<p>No cumulative landscape effects occur with other existing or permitted wind energy developments.</p> <p>It is high unlikely that there is intervisibility of the Proposed Development turbines and the proposed Lemanaghan turbines or proposed Derryadd turbines within this LCA. Therefore, there is unlikely to be any cumulative effects on the landscape and character of this LCA.</p>
Magnitude of Change (Definition from Section 1.4.2 of Methodology Appendix 12-1)	Negligible: <i>“A change affecting smaller areas of landscape character including the loss of some landscape elements or the addition of features or elements which are either of low value or hardly noticeable.”</i>
Significance of Effect	Low x Negligible = Negligible = Imperceptible (EPA, 2022) An effect capable of measurement but without significant consequences.

Mitigating Factors	<ul style="list-style-type: none"> ➤ Visibility within this LCA only likely to occur in elevated, localised areas beyond 7 km from the Wind Farm Site where the turbines will appear as small background elements in another landscape area, and so any potential effects on landscape character are mitigated by distance.
Residual Effect (incl. mitigating factors)	<p>Imperceptible (EPA, 2022) An effect capable of measurement but without significant consequences.</p>

Longford LCU 6 – Peatlands	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 9.3 km north of the nearest proposed turbine (T1). At its furthest point the LCA extends 34km north of proposed turbine T1.
LCA Key Characteristics (Chapter 14 of the Longford County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ <i>“The topography is notably flat, with the majority of the land lying below the 50m contour line.</i> ➤ <i>This, when combined with the limited vegetation cover and extensive peat land cover mean that views are available across wide areas throughout the unit.</i> ➤ <i>Drainage patterns in the area are heavily influenced by artificial means employed to retain water levels and prevent inundation of commercial peatlands.</i> ➤ <i>The Shannon system is the main natural influence, draining the area via the Camlin, Fallan and Bilberry rivers. Seasonal flooding persists in the northern sector, particularly in the vicinity of the Camlin River.</i> ➤ <i>The settlement pattern in this unit tends to be less dispersed and more focussed into the designated towns and villages than other areas, given the difficult nature of the terrain.”</i>
Landscape Sensitivity to Wind Farm Development	<p>For LCU 6, Chapter 14 of the LCDP reports <i>“The visual sensitivity of the landscapes in this unit are generally LOW, as their flat nature allows development to be accommodated with minimum screening needed to achieve integration into its surrounds. An exception to this designation is the vicinity of the Royal Canal, where sensitivity is HIGH. In environmental terms, sensitivity can be generally termed Medium to High due to the limited capacity of the receiving environment to cater for additional effluent loading.”</i></p> <p>This LCA has been given a Low sensitivity rating on account of its low visual sensitivity and flat topography, improving its ability to accommodate developments, particularly where those are located a substantial distance outside of the LCA.</p>
Visibility of the proposed turbines within the LCA	Although the ZTV indicates a large distribution of full theoretical visibility. Site investigations determined that actual visibility of the proposed turbines is likely to be very limited within this low lying, flat and enclosed midland landscape. Although there may be some minor visibility of the proposed turbines from remote elevated vantage points, in general there are limited long-ranging views in the direction of the proposed turbines from areas of this LCA within 15km of the proposed turbines (LVIA Study Area for Assessment of Landscape Character).

Cumulative Baseline	No existing or permitted turbines are located in this LCA and the LVIA Study Area. The proposed Derryadd turbines are likely to be located within this LCA approximately 19 km north-west of the Wind Farm Site.
Cumulative Landscape Effects	No cumulative landscape effects occur with other existing or permitted wind energy developments. It is high unlikely that there is intervisibility of the Proposed Development turbines and the proposed Kepak, Lemanaghan or Derryadd turbines within this LCA. Therefore, there is unlikely to be any cumulative effects on the landscape and character of this LCA.
Magnitude of Change <i>(Definition from Section 1.4.2 of Methodology Appendix 12-1)</i>	Negligible: <i>“A change affecting smaller areas of landscape character including the loss of some landscape elements or the addition of features or elements which are either of low value or hardly noticeable.”</i>
Significance of Effect	Low x Negligible = Negligible = Imperceptible (EPA, 2022) An effect capable of measurement but without significant consequences.
Mitigating Factors	<ul style="list-style-type: none"> ➤ The sensitive landscape receptors in this LCA such as the Royal Canal, are located the north of this LCA far beyond the 15km LVIA Study Area for assessment of Landscape Character. ➤ Views of the proposed turbines are likely to be very limited from within the flat landscape of this LCA located within the 15km LVIA Study Area for assessment of landscape character.
Residual Effect (incl. mitigating factors)	Imperceptible (EPA, 2022) An effect capable of measurement but without significant consequences.

Longford LCU 7 – Open Agricultural	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 6.8 km north of the nearest proposed turbine (T1). At its furthest point the LCA extends 27.2km north of T1.
LCA Key Characteristics (Chapter 14 of the Longford County Development Plan, 2021-2027)	<ul style="list-style-type: none"> ➤ <i>“The northern section of the unit contains the most elevated area, including Farnagh Hill and Ardagh (Bawn) and Castlerea Mountain, all of which contain full and/or intermittent scenic views listed for preservation under the County Development Plan. The southern and eastern sections of the unit consist mainly of gently undulating pastoral land.</i> ➤ <i>Generally characterised by larger, open fields, interspersed with mature trees. Plantations of deciduous and mixed woodland punctuate the landscape.</i> ➤ <i>Drainage in the southern and eastern section of the unit is dominated by the River Inny, which is fed by numerous tributary streams and rivers. The northern section drains toward the Camlin River.</i> ➤ <i>This unit has the most developed urban structure of the County, being served by twelve designated settlements.”</i>

<p>Landscape Sensitivity to Wind Farm Development</p>	<p>For LCU 7, Chapter 14 of the LCDP reports “<i>Landscape Sensitivity can be categorised as Low to Medium. An exception to this designation is the vicinity of the Royal Canal, the River Inny, in Upland Areas with designated scenic views, and in proximity to the heritage village of Ardagh where sensitivity is High.</i>”.</p> <p>This LCA has been given a Medium sensitivity rating on account of its low to medium visual sensitivity and the location of the Royal Canal within the Study Area.</p>
<p>Visibility of the proposed turbines within the LCA</p>	<p>Although the ZTV indicates a large distribution of full theoretical visibility, actual visibility of the proposed turbines is very limited due to the woodlands interspersed throughout the landscape (as noted in the LCA description). 5 No. Photowires (early-stage photomontages) were captured in this LCA - AltVP-U, AltVP-V, AltVP-W AltVP-X and AltVP-Y, and are presented within Appendix 13-5). As shown in these images, views of the proposed turbines are limited from within this LCA.</p>
<p>Cumulative Baseline</p>	<p>No other existing, permitted or proposed turbines exist in this LCA. The proposed Derryadd turbines are likely to be located approximately 3.6km from the closest part of the LCA within the Study Area for Landscape Character Assessment (15km). The proposed Derryadd turbines are unlikely to be visible from most of this LCA within the Study Area due to the mature treelines and hedgerows that border fields within the LCA. It is unlikely that the proposed Kepak or Lemanaghan turbines will be visible from within this LCA.</p>
<p>Cumulative Landscape Effects</p>	<p>No cumulative landscape effects occur with other existing or permitted wind energy developments.</p> <p>It is highly unlikely that there is intervisibility between the Proposed Development turbines and the proposed Kepak, Lemanaghan or Derryadd turbines within this LCA. Therefore, there is unlikely to be any cumulative effects on the landscape and character of this LCA within the LVIA Study Area.</p>
<p>Magnitude of Change (Definition from Section 1.4.2 of Methodology Appendix 12-1)</p>	<p>Negligible: “<i>A change affecting smaller areas of landscape character including the loss of some landscape elements or the addition of features or elements which are either of low value or hardly noticeable.</i>”</p>
<p>Significance of Effect</p>	<p>Medium x Negligible = Minor/Negligible = Not Significant (EPA, 2022) An effect which causes noticeable changes in the character of the environment but without significant consequences.</p>
<p>Mitigating Factors</p>	<ul style="list-style-type: none"> ➤ Vegetation, such as large coniferous forestry plantations, limits long-ranging views and visibility of the proposed turbines in large parts of this LCA. ➤ Visibility within this LCA is only likely to occur in elevated, localised areas beyond 7 km from the Wind Farm Site where any potential effects on landscape character are mitigated by distance.
<p>Residual Effect (incl. mitigating factors)</p>	<p>Not Significant (EPA, 2022)</p>

	An effect which causes noticeable changes in the character of the environment but without significant consequences.
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County Offaly

County Offaly does not have any designated LCAs. As reported in Section 12.4.1.2.1 of Chapter 12 of this EIAR - *Landscape Character Areas – Other Counties in the LVIA Study Area*, MKO has prepared an interim Landscape Character Area (undesigned) for the area of County Offaly located within the LVIA Study Area (15 km for Landscape Character). This interim LCA has been given the name ‘North-Western Lowland Farmland and Marginal Peatland’ and it has been comprehensively described and assessed below. The description and sensitivity of this interim LCA has been derived from site visits, desk studies and assessments conducted by the MKO Landscape & Visual team (as well as being used previously for the assessment of LCAs in the LVIA for the permitted Derrinlough Wind Farm).

Interim LCA – North-Western Lowland Farmland and Marginal Peatland	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 5.5 km south of the nearest proposed turbine (T9). At its furthest point the LCA extends 31.2km south of T9. The proposed Grid Connection route follows the local road network in a south-easterly direction from the Wind Farm Site, traversing the north-eastern portion of this LCA.
LCA Key Characteristics (Determined by MKO Landscape & Visual Team)	<ul style="list-style-type: none"> ➤ The landscape is dominated by lowland farmland and marginal peatland. The LCA is a relatively flat, low-lying landscape with the Gageborough River flowing through the centre. ➤ Durrow Monastic Site and Demesne is an important feature of cultural heritage value in the landscape. ➤ Peatlands act as important amenity areas for locals and visitors ➤ Several Eskers are located within this LCA, Offaly Council recognises the unique importance of Offaly’s Esker Landscape deriving from its geological, zoological, botanical, scientific and landscape value. ➤ Clara Bog, located within this LCA, is designated as an Area of High Amenity, Natural Heritage Area and Nature Reserve ➤ Clara and Ballycumber are the significant settlements within this Interim LCA.
Landscape Sensitivity to Wind Farm Development	Within Chapter 4 of the OCDP 2021-27, a number of areas within this interim LCA are designated as areas of high amenity (Clara Bog, Clara Eskers, Durrow Monastic Site and Demesne and Eiscir Riada). From Map 10 within the OCDP, the majority of this interim LCA is deemed as not suitable for wind energy development. However, Map 7 in the OCDP shows that there are a number of areas deemed ‘Open for consideration for wind energy development’ in principle. Therefore, on balance, a Medium landscape sensitivity to wind farm development is assigned for this LCA.
Visibility of the proposed turbines within the LCA	The ZTV indicates large patches of no theoretical visibility (58.61%) as well as small patches of full theoretical visibility (35%). Actual visibility of the proposed turbines is very limited within this low lying, flat and enclosed midland landscape (as noted in the LCA description). AltVP41 and AltVP42 were captured from This LCA. AltVP41 was captured from Clara Bog and shows that there is no visibility of the proposed turbines from this

	<p>bog. AltVP was captured from an elevated bridge over the motorway and shows no visibility.</p> <p>The Grid Connection route passes through this LCA and ends at Thornsberry substation near Tullamore. The route will be underground and landscape effects will be limited to the construction phase.</p>
Cumulative Baseline	<p>No existing or permitted turbines are located in areas of this LCA located in the LVIA Study Area.</p> <p>The fifteen turbines of the proposed Lemanaghan Wind Farm are likely to be located within this interim LCA. The proposed Kepak turbine is located 940m east of this LCA at its nearest point.</p>
Cumulative Landscape Effects	<p>No cumulative landscape effects occur with other existing or permitted wind energy developments.</p> <p>The Proposed Development turbines are likely to be located a substantial distance (16.2km) from the proposed Lemanaghan turbines. There is a very small likelihood that there will be intervisibility between the Proposed Development turbines and the proposed Lemanaghan turbines within this LCA. From this LCA it is unlikely that there will be visibility of the proposed Kepak turbine in the same views as the Lemanaghan or Proposed Development turbines. Therefore, there is unlikely to be any cumulative effects on the landscape and character of this LCA.</p>
Magnitude of Change <i>(Definition from Section 1.4.2 of Methodology Appendix 12-1)</i>	Negligible: <i>“A change affecting smaller areas of landscape character including the loss of some landscape elements or the addition of features or elements which are either of low value or hardly noticeable.”</i>
Significance of Effect	Medium x Negligible = Minor/Negligible = Not Significant (EPA, 2022) An effect which causes noticeable changes in the character of the environment but without significant consequences.
Mitigating Factors	<ul style="list-style-type: none"> ➤ Vegetation, such as mature treelines and hedgerows present in the farmland landscape limits visibility in many places. ➤ The intervening distance between the proposed turbines and areas where theoretical visibility occurs will reduce the visual prominence of the turbines in terms of their horizontal and vertical extent in any views.
Residual Effect (incl. mitigating factors)	Not Significant (EPA, 2022) An effect which causes noticeable changes in the character of the environment but without significant consequences.