

## **Appendix 14-2: LCA Assessment Tables**

Carrow Wind Farm, Co.  
Tipperary





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# 1. LANDSCAPE CHARACTER AREA (LCA) ASSESSMENT TABLES

It is recommended that the impact assessments in this appendix are read in conjunction with the following figures in the LVIA (Chapter 14 of the EIAR):

- > Figure 14-7: Landscape Character Areas Map,
- > Figure 14-8: ZTV and Landscape Character Areas Map.

The full methodology for conducting the assessment of landscape effects on designated LCAs is provided in *Appendix 14-1: LVIA Methodology*.

The specific maps, tables, appendices, sections and chapters of local policy documents consulted for designated LCAs in Co. Tipperary and Co. Limerick are detailed in this LVIA *Appendix 14-1 LVIA Methodology*, Section 1.7 Assessing Landscape Effects.

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 *Appendix 14-1*, Section 1.7.5 Landscape Effects Assessment Matrix.

1.1

## County Tipperary

1.1.1

### LCA-2: Thurles Hinterland

Tipperary LCA-2: Thurles Hinterland	
<b>Map Ref.</b>	T-LCA-2
<b>Distance from the Site to Nearest/Furthest Area of LCA</b>	At its closest point, LCA-2 is located approx. 7.5km northeast of the Proposed Wind Farm site. This LCA was selected for assessment owing to its high area of theoretical visibility according to the ZTV map (Figure 14.8 of Chapter 14).
<b>LCA Key Characteristics</b>	<p>From TCDP 2022-2028 Vol.3 App.3, Table 3.1 (p.24):</p> <p><i>“Plains – Lowland Pasture &amp; Arable: This is the most common type of landscape in Tipperary. It consists mainly of grasslands and tillage enclosed by hedges. These areas also contain areas of woodlands, rivers and settlements – as well as a dense network of roads, utility lines and farm buildings. The character and appearance of these areas can be significantly different depending on proximity to other landscapes such as uplands and hills.”</i></p> <p>Generalised LCA-2 description (TCDP Vol.3 App.3, Table 4.1, p.29):</p> <p><i>“The Thurles hinterland forms a flat open landscape lying below the rolling hills of Kilcommon and Upperchurch to the west. This landscape character area is well drained, being bounded by the Clodiagh River in the west, which drains southwards to the River Suir.”</i></p> <p>Landscape condition (TCDP Vol.3 App.3, Appendix 1, p.9):</p> <ul style="list-style-type: none"> <li>➤ <i>“This is an open working landscape which is in good condition but is relatively unremarkable in terms of scenic quality.</i></li> <li>➤ <i>The presence of regional, national and local road infrastructure together with an abundance of settlements and dwellings render this a landscape that reflects high levels of human intervention.</i></li> <li>➤ <i>This has led to a landscape in which the natural characteristics are less dominant.</i></li> <li>➤ <i>This need not be regarded as a sensitive landscape other than the specific environs of the River Suir for habitat value reasons.”</i></li> </ul> <p>Landscape characteristics (TCDP Vol.3 App.3, Appendix 1, p.7):</p> <ul style="list-style-type: none"> <li>➤ <i>“A flat and gently undulating agricultural plain with views dominated by western hills.</i></li> <li>➤ <i>Significant communication routes evident by national roads and the railway line.</i></li> <li>➤ <i>Thurles is the principal town, but several other settlements reflect the long settlement history in this LCA.</i></li> <li>➤ <i>Holycross Abbey, a well-known Cistercian Abbey, located on the Suir River, close to the county boundary.”</i></li> </ul>

<b>Tipperary LCA-2: Thurles Hinterland</b>	
<b>LCA Capacity for Wind Energy Development</b>	<p>Regarding Map 11 of Wind Energy Policy Areas in the TCDP 2022-2028 WES, the entire land area of LCA-2 within the 15km LCA Study Area aligns with land zoned as “Open to Consideration” defined as areas open to consideration for new wind energy development. In terms of this assessment, the land zoning is considered from a visual perspective only, since no infrastructure of the Proposed Project is located within the LCA.</p>
<b>Landscape Sensitivity to Wind Farm Development</b>	<p><b>Sensitivity = Low.</b></p> <p>On balance, the sensitivity of LCA-2 to wind energy development is deemed to be Low. In terms of this assessment, this sensitivity is considered from a visual perspective only, since no infrastructure of the Proposed Project is located within the LCA. The rationale points derived from content reported in TCDP Vol.3 App.3 include:</p> <ul style="list-style-type: none"> <li>➤ The likely landscape effects for LCAs in the Plains category to the “Energy – Wind Farms” driver of change are given as “Low” and the Plains are considered the most robust general landscape type (Table 2.1, p.15).</li> <li>➤ The range of general sensitivity for LCA-2 is given as “Robust” to “Normal,” with the dominant sensitivity rating being “Normal” or “Class 1 Low Sensitivity to Change” (Table 5.2, p.47).</li> <li>➤ The description of Normal/Class1 landscapes is given as “<i>Working landscapes with no sensitivities and established patterns of use and settlement.</i>” (Table 5.1, p.43). Two different categories of planning objectives are indicated for LCA-2, that in Table 5.1 (p.43) is given as “Continue” with the guideline as “<i>Facilitate development that continues established patterns of use and settlement without significant change to appearance or character,</i>” while the objective in Table 6.1 (p.49) is given as “Improve” with the guideline as “<i>Encourage development that will improve the appearance and character of the area.</i>”</li> <li>➤ The compatibility of LCA-2 to “Windfarm” land-use type is given as “Low” (Table 6.2, p.50) and indicates that other types of land-use may be more ideally compatible over wind.</li> <li>➤ “<i>This is a high capacity/low sensitivity, Class 1 Landscape i.e. Change or Development generally acceptable – subject to all other relevant objectives and policies - as it may beneficially alter, enhance or reinforce landscape character and value (e.g. the landscape is robust in its character, undergoing change or the precedent for such and similar development is set and the landscape is capable of absorbing considerable change without detriment)</i>” (Appendix 1, p.9).</li> </ul> <p>Refer to Section 1.7.3 Sensitivity of Landscape Character Areas in <i>Appendix 14-1: LVIA Methodology.</i></p>
<b>Visibility of the Proposed Project from within the LCA</b>	<p>The ZTV map (Figure 14-8 in Chapter 14) shows mixed theoretical visibility of the proposed turbines throughout LCA-2. In the north of this LCA there is partial visibility due to the visual screening from topographical landforms north and east of the Proposed Wind Farm. Actual visibility from this LCA will be less than what is shown on the ZTV due to the distance and visual screening from intervening vegetation in the landscape. Views of the proposed turbines will be limited to locations on elevated vantage points.</p>

Tipperary LCA-2: Thurles Hinterland	
	Viewpoint VP13 is located within this LCA, >10km from the proposed turbines.
<b>Cumulative Effects</b>	There are no existing, permitted or proposed wind turbines located within this LCA in the 15km LCA Study Area. Several of the existing turbines within LCA-17a may be visible along with the proposed turbines from areas within this LCA.
<b>Magnitude of Change</b>	<p><b>Magnitude = Negligible.</b></p> <p><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. The effects could be short-term and/or reversible.”</i></p> <p>Refer to Section 1.7.4 Magnitude of Landscape Change in <i>Appendix 14-1: LVIA Methodology</i>.</p>
<b>Significance of Effect</b>	<p><b>Low × Negligible = Negligible = “Imperceptible” (EPA, 2022)</b></p> <p><i>“An effect capable of measurement but without significant consequences.”</i></p> <p>Refer to Section 1.7.5 Landscape Effects Matrix in <i>Appendix 14-1: LVIA Methodology</i>.</p>
<b>Mitigation Factors</b>	<p>Mitigation factors that reduce the potential for effects on landscape character were considered in determining the residual effect reported above:</p> <ul style="list-style-type: none"> <li>➤ No infrastructure of the Proposed Project is located within this LCA, therefore material effects on the landscape are none.</li> <li>➤ The key visual characteristic of the LCA being “<i>views dominated by western hills</i>” is not affected by the location/distance of the proposed turbines, which will be at very modest scale relative to the landscape and are seen in the background of views.</li> <li>➤ The proposed turbines will be viewed from this LCA at great distance (&gt;15km) within the setting of existing wind energy development in the same general area.</li> <li>➤ The LCA is classed as “Low Sensitivity to Change” and is described as “<i>unremarkable in terms of scenic quality</i>” and is therefore able to absorb changes in terms of views within the LCA.</li> </ul>

1.1.2

## LCA-4: River Suir Central Plain

Tipperary LCA-4: River Suir Central Plain	
<b>Map Ref.</b>	T-LCA-4
<b>Distance from the Site to Nearest/ Furthest Area of LCA</b>	At its two closest points, LCA-4 is located approximately 3.3km from proposed turbine T10 in the east of the Proposed Wind Farm site and 4.4km from T08 in the southwest, forming a curved extent to the east and south of the Proposed Wind Farm site. Approximately 7.4km of the underground Proposed Grid Connection Route runs through the northwest tip of this LCA, within the 15km LCA Study Area.
<b>LCA Key Characteristics</b>	<p>From TCDP 2022-2028 Vol.3 App.3, Table 3.1 (p.24):</p> <p><i>“Plains – Lowland Pasture &amp; Arable: This is the most common type of landscape in Tipperary. It consists mainly of grasslands and tillage enclosed by hedges. These areas also contain areas of woodlands, rivers and settlements – as well as a dense network of roads, utility lines and farm buildings. The character and appearance of these areas can be significantly different depending on proximity to other landscapes such as uplands and hills.”</i></p> <p>Generalised LCA-4 description (TCDP Vol.3 App.3, Table 4.1, p.29):</p> <p><i>“This area is also known as part of the ‘Golden Vale’. It is the most extensive and coherent landscape area in the county. It forms the large central area of the county where it is associated with the River Suir and also extends west along the tributaries of the Multeen, Thonouge and Tar and eastwards along the Anner. It is characterised by its rich and productive agricultural lands and rolling landscape. It also incorporates the large towns of the County and many settlements and villages. The M8 Motorway transverses the central plain in a neat east – west divide.”</i></p> <p>Landscape condition (TCDP Vol.3 App.3, Appendix 1, p.18):</p> <ul style="list-style-type: none"> <li>➤ <i>“The landscape of the Suir Central Plain has been heavily influenced by man’s activities since early times and the LCA offers a rich palimpsest of layers of agriculture and settlement activity.</i></li> <li>➤ <i>It is considered that in general the Suir Valley Central Plain is robust in its ability to absorb change and especially change associated with the existing agricultural uses outside of settlements and change associated with development and growth in the larger towns and smaller villages.”</i></li> </ul> <p>Landscape characteristics and distinctive features (TCDP Vol.3 App.3, Appendix 1, p.16):</p> <ul style="list-style-type: none"> <li>➤ <i>“Wide rolling vistas with large fertile fields, surrounded by dense hedgerows. Agriculture is intensive, and the equine industry is especially noticeable. Biodiversity in the landscape is less conspicuous than in some of the other county LCAs, and very little natural landscape or habitats remain.</i></li> <li>➤ <i>Strong settlement network built on an extensive transport network that includes, the M8 Motorway, the national Rail Line, the N24 and N76 and the regional and local road network.</i></li> </ul>

<b>Tipperary LCA-4: River Suir Central Plain</b>	
	<ul style="list-style-type: none"> <li>➤ <i>The large towns of Clonmel, Carrick-on-Suir, Tipperary, Cashel and Cahir are located in the LCA along with the smaller settlements and villages. A pattern of one-off housing occurs along local roads in many areas especially the urban hinterlands of the larger towns.</i></li> <li>➤ <i>The existence of views towards the Galtee Mountains, the Commeraghs, the Knockmealdowns and Slievenamon. Views towards one or more of these ranges can be found almost anywhere in the LCA.</i></li> <li>➤ <i>Certain man-made features form prominent and immediately recognisable features in the landscape. These include: The Rock of Cashel, the steam clouds from the Medite Wood Products factory in Clonmel, the M8 Motorway and the tower of Rockwell College at New Inn.</i></li> <li>➤ <i>An established and extensive equine industry and associated infrastructure and employment base. The equine industry is attracted to the River Suir Central Plains due to the rich limestone-based soils in the area.</i></li> <li>➤ <i>Rich and established arable and pastoral agriculture with focus on dairying and open field of tillage crops.</i></li> <li>➤ <i>It is notable that the landscape has been heavily influenced by man’s activities i.e. the network of field enclosures and the transport and settlement network.</i></li> <li>➤ <i>Actively growing larger towns. Villages that have to some extent stagnated in their levels of growth, especially those removed from the larger settlements and transport networks.</i></li> <li>➤ <i>The term the ‘Golden Vale’, is often applied to the rich agricultural landscape of the area.</i></li> <li>➤ <i>The numerous settlements in the LCA have strong associations with sport and especially the GAA. Playing fields are apparent. The county association with the horse can also be seen by the location of its two public racing tracks at Clonmel and Limerick Junction.</i></li> <li>➤ <i>Visual Units: The LCA encompasses a number of visual units in the county these visual areas include the South West Plain, The North East Plain, The Rock of Cashel Plain, and the Anner Valley.”</i></li> </ul>
<b>LCA Capacity for Wind Energy Development</b>	Regarding Map 11 of Wind Energy Policy Areas in the TCDP 2022-2028 WES, the land area of LCA-4 within the 15km LCA Study Area which surrounds the underground Proposed Grid Connection Route aligns with land zoned as “Open to Consideration” defined as areas open to consideration for new wind energy development.
<b>Landscape Sensitivity to Wind Farm Development</b>	<p><b>Sensitivity = Low.</b></p> <p>On balance, the sensitivity of LCA-4 to wind energy development is deemed to be Low. The rationale points derived from content reported in TCDP Vol.3 App.3 include:</p> <ul style="list-style-type: none"> <li>➤ The likely landscape effects for LCAs in the Plains category to the “Energy – Wind Farms” driver of change are given as “Low” and the Plains are considered the most robust general landscape type (Table 2.1, p.15).</li> </ul>

<b>Tipperary LCA-4: River Suir Central Plain</b>	
	<ul style="list-style-type: none"> <li>➤ The range of general sensitivity for LCA-4 is given as “Robust” to “Normal,” with the dominant sensitivity rating being “Normal” or “Class 1 Low Sensitivity to Change” (Table 5.2, p.47).</li> <li>➤ The description of Normal/Class1 landscapes is given as “<i>Working landscapes with no sensitivities and established patterns of use and settlement.</i>” (Table 5.1, p.43). The planning objective for LCA-4 is given as “Continue” with the guideline as “<i>Facilitate development that continues established patterns of use and settlement without significant change to appearance or character</i>” (Table 5.1, p.43 and Table 6.1, p.49).</li> <li>➤ The compatibility of LCA-4 to “Windfarm” land-use type is given as “Low” (Table 6.2, p.50) and indicates that other types of land-use may be more ideally compatible over wind.</li> <li>➤ “<i>This is a high capacity/low sensitivity, Class 1 Landscape i.e. Change or Development generally acceptable – subject to all other relevant objectives and policies - as it may beneficially alter, enhance or reinforce landscape character and value (e.g. the landscape is robust in its character, undergoing change or the precedent for such and similar development is set and the landscape is capable of absorbing considerable change without detriment)</i>” (Appendix 1, p.18).</li> </ul> <p>Refer to Section 1.7.3 Sensitivity of Landscape Character Areas in <i>Appendix 14-1: LVIA Methodology.</i></p>
<b>Visibility of the Proposed Project from within the LCA</b>	<p>The ZTV map (Figure 14.8 in Chapter 14) shows mostly full theoretical visibility of the proposed turbines throughout LCA-4. However, onsite visibility appraisals of these areas found that actual visibility in the direction of the proposed turbines along many roads is substantially less due to the visual screening by intervening vegetation throughout the landscape.</p> <p>Viewpoints VP04, VP05, VP08, VP14 and VP15 are located within this LCA.</p>
<b>Cumulative Effects</b>	<p>There are no existing, permitted or proposed wind turbines located within this LCA in the 15km LCA Study Area. Several of the existing turbines within LCA-17a may be visible along with the proposed turbines from areas within this LCA.</p>
<b>Magnitude of Change</b>	<p><b>Magnitude = Slight.</b></p> <p><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>Refer to Section 1.7.4 Magnitude of Landscape Change in <i>Appendix 14-1: LVIA Methodology.</i></p>
<b>Significance of Effect</b>	<p><b>Low × Slight = Minor/Negligible = “Not Significant” (EPA, 2022)</b></p>

Tipperary LCA-4: River Suir Central Plain	
	<p><i>“An effect which causes noticeable changes in the character of the environment but without significant consequences.”</i></p> <p>Refer to Section 1.7.5 Landscape Effects Matrix in <i>Appendix 14-1: LVIA Methodology</i>.</p>
<b>Mitigation Factors</b>	<p>Mitigation factors that reduce the potential for effects on landscape character were considered in determining the residual effect reported above:</p> <ul style="list-style-type: none"> <li>➤ Only underground infrastructure of the Proposed Grid Connection is located within this LCA, therefore material effects on the landscape will be temporary, localised and transient in nature, limited to the installation of grid connection components primarily along public corridors.</li> <li>➤ Following the Construction Phase of the Proposed Project, the material landscape effects on this LCA will be none, as the landscape will be allowed to return to its natural state of baseline character and condition.</li> <li>➤ The key visual characteristic of the LCA being <i>“wide rolling vistas with large fertile fields, surrounded by dense hedgerows”</i> is not affected by the location/distance of the proposed turbines, which are located above and in the opposite direction of views of the lowland plains (which would be primarily directed southwards).</li> <li>➤ The LCA is classed as “Low Sensitivity to Change” and is given the objective to <i>“facilitate development that continues established patterns of use and settlement without significant change to appearance or character”</i> and is therefore able to absorb changes in terms of the addition of underground infrastructure within the LCA.</li> </ul>

1.1.3

## LCA-17a: Hollyford Hills Mountain Mosaic

Tipperary LCA-17a: Hollyford Hills Mountain Mosaic	
<b>Map Ref.</b>	T-LCA-17a
<b>Distance from the Site to Nearest/ Furthest Area of LCA</b>	All proposed turbines are located within LCA-17a positioned within its central-southeastern area. At its furthest point to the northwest of the Proposed Wind Farm site, this LCA extends approximately 8.7km from the Proposed Wind Farm site. Approximately 4.9km of the underground Proposed Grid Connection Route runs through this LCA to the southwest of the Proposed Wind Farm site, within the 15km LCA Study Area.
<b>LCA Key Characteristics</b>	<p>From TCDP 2022-2028 Vol.3 App.3, Table 3.1 (p.24):</p> <p><i>“Forested Foothills: The foothills of the west of the county are generally of higher elevations, steeper slopes and shallower soils with poorer drainage. This has resulted in significant concentrations of coniferous forestry – interspersed with smaller farms. These areas produce many fine views of the plains below – often framed by wooded foregrounds.”</i></p> <p>Generalised LCA-17a description (TCDP Vol.3 App.3, Table 4.1, p.29):</p> <p><i>“A foothills zone of moorland, forestry and marginal pasture. The Cahernahallia and Multeen River valleys, are both visual units in which a distinct sense of enclosure is perceived. These are considered sub-areas of the LCA.”</i></p> <p>Landscape characteristics and distinctive features (TCDP Vol.3 App.3, Appendix 1, p.66):</p> <ul style="list-style-type: none"> <li>➤ <i>“Complex arrangement of rounded hills and steep sided valleys becoming less pronounced and enclosed towards the south and east.</i></li> <li>➤ <i>Mountain marginal mosaic, in the north.</i></li> <li>➤ <i>Linear uplands to the south.</i></li> <li>➤ <i>Sparsely populated particularly in central area with remote character.</i></li> <li>➤ <i>Extensive views eastwards from elevated points across to Kilkenny and the south of the county.</i></li> <li>➤ <i>Cluster of prehistoric graves around Rearcross-Kilcommon creating a distinct archaeological landscape of significant value.</i></li> <li>➤ <i>Principal settlements on perimeter of LCA at Templeberry and Borrisoleigh.</i></li> <li>➤ <i>The Bilboa River drains southwards, whilst the other principal rivers, the Clodiagh drains south easterly before joining the Cromoge River and eventually joining the Suir.</i></li> <li>➤ <i>Varying degree of enclosure / exposure in the landscape, but distinctly more contained than elsewhere in the County, especially towards the north and west.</i></li> <li>➤ <i>Upland Forestry Plantation, Marginal Mountain Mosaic.</i></li> <li>➤ <i>Otherwise random land cover / use pattern, with forestry at lower altitudes than pasture in some areas.</i></li> <li>➤ <i>Plantations extending right over the hilltops, thus excluding the moorland areas found elsewhere.</i></li> <li>➤ <i>Spectacular views towards the south taking in most of the County, from the area’s southern hilltops.</i></li> </ul>

<b>Tipperary LCA-17a: Hollyford Hills Mountain Mosaic</b>	
	<ul style="list-style-type: none"> <li>➤ <i>Visual Units: Cahernahallia and Multeen Valleys located within the area.”</i></li> </ul>
<b>LCA Capacity for Wind Energy Development</b>	<p>Regarding Map 11 of Wind Energy Policy Areas in the TCDP 2022-2028 WES, the entirety of LCA-17a is within the 15km LCA Study Area boundary. All proposed turbines are sited within land zoned as “Open to Consideration,” defined as areas open to consideration for new wind energy development. The majority of the Proposed Wind Farm site itself is within the portion of LCA-17a zoned as Open to Consideration.</p> <p>The remaining land area (approximately 50%) of LCA-17a outside the northwest edge of the Proposed Wind Farm site is zoned as “Unsuitable,” defined as areas unsuitable for new wind energy development, with three small areas along the northwestern border of the site and one minor section of the Proposed Grid Connection Route immediately to the southwest of the site aligning with land zoned as Unsuitable.</p>
<b>Landscape Sensitivity to Wind Farm Development</b>	<p><b>Sensitivity = Low.</b></p> <p>On balance, the sensitivity of LCA-17a to wind energy development is deemed to be Low. The rationale points derived from content reported in TCDP Vol.3 App.3 include:</p> <ul style="list-style-type: none"> <li>➤ The compatibility of LCA-17a to “Windfarm” land-use type is given as “High” (Table 6.2, p.50), which is the highest compatibility classification for wind energy development out of a five-tier compatibility scale—only two LCAs in the county have been given this capacity rating for the wind energy land-use type. This favourable compatibility rating indicates that the landscape is highly suitable for wind energy development.</li> <li>➤ <i>“This is a working landscape featuring pasture as the dominant land use in the north and forestry in parts of the south. The nature of the varying topography is such that there is a capacity to accommodate development without undue deterioration in the scenic quality”</i> (Appendix 1, p.68).</li> <li>➤ <i>“The area is of Medium Sensitivity so Change or Development is generally acceptable as it may beneficially alter, enhance or reinforce landscape character and value (e.g. the landscape is somewhat degraded, undergoing change or the precedent for such and similar development is set and the landscape is capable of absorbing considerable change without detriment)”</i> (Appendix 1, p.68).</li> <li>➤ The likely landscape effects for LCAs in the Foothills category to the “Energy – Wind Farms” driver of change are given as “High” though the Foothills are considered more robust (Table 2.1, p.15).</li> <li>➤ The range of general sensitivity for LCA-17a is given as “Transitional Sensitivity” to “Vulnerable,” with the dominant sensitivity rating being “Sensitive” or “Class 3 High Sensitivity to Change” (Table 5.2, p.47).</li> <li>➤ The description of Sensitive/Class 3 landscapes is given as “Areas requiring significant additional care during design and assessment of alternatives to determine how established patterns of use and settlement can be accommodated.” (Table 5.1, p.43). The planning objective for LCA-17a is given as “Wise Use, Best Choice” with the guideline as <i>“Facilitate development that conclusively demonstrates</i></li> </ul>

Tipperary LCA-17a: Hollyford Hills Mountain Mosaic	
	<p><i>wise use and best choices to continue and enhance established patterns of use and settlement without significant change to, or loss of, appearance or character” (Table 5.1, p.43 and Table 6.1, p.49).</i></p> <p>Refer to Section 1.7.3 Sensitivity of Landscape Character Areas in <i>Appendix 14-1: LVIA Methodology.</i></p>
<b>Visibility of the Proposed Project from within the LCA</b>	<p>The ZTV map (Figure 14-8 in Chapter 14) shows a large area of theoretical visibility within 5km to the south of the proposed turbines. To the north of the proposed turbines the ZTV shows very limited theoretical visibility over a wide area of the LCA due to the topography screening from the wider Slieve Felim Mountain range comprising the broad landscape north of the site. As there are large areas of forestry tracts immediately surrounding the Proposed Wind Farm site, and steep terrain comprising spatial enclosures within the foothills, visibility of the proposed turbines in close proximity to the site are likely to be limited.</p> <p>Viewpoints VP01, VP02, VP03, VP06, VP07, VP09 and VP10 are located within this LCA.</p>
<b>Cumulative Effects</b>	<p>9 no. existing wind farms are also located in LCA-17a: Glencarbry 1, Glencarbry 2, Cappawhite, Garracummer, Glenlough, Turaheen Lower, Turaheen Upper, Hollyford and Inchivara; these developments are situated amongst the steep mountainous terrain which greatly limits cumulative visibility of turbines, being as they are within relatively small spatial enclosures. The potential cumulative visibility of the proposed Carrow turbines with these other developments is as follows.</p> <p>From the portion of LCA-17a in the south, which comprises the lowland terrain at the base of the mountain range, the proposed turbines will potentially be visible in combination with the existing Glencarbry turbines in views looking up into the foothills. There will also be instances where the proposed turbines are potentially visible in combination with the Glenlough and Turaheen turbines. From the northwest portion of LCA-17a, there may be potential views of the proposed turbines with the Glencarbry, Glenlough, Turaheen and Cappawhite turbines in one direction and potential views with the existing Garracummer turbines in the opposite direction.</p>
<b>Magnitude of Change</b>	<p><b>Magnitude = Moderate.</b></p> <p><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. The effects could be long to medium term and/or partially reversible.”</i></p> <p>Refer to Section 1.7.4 Magnitude of Landscape Change in <i>Appendix 14-1: LVIA Methodology.</i></p>
<b>Significance of Effect</b>	<p><b>Low × Moderate = Minor = “Slight” (EPA, 2022)</b></p>

Tipperary LCA-17a: Hollyford Hills Mountain Mosaic	
	<p><i>“An effect which causes noticeable changes in the character of the environment without affecting its sensitivities”.</i></p> <p>Refer to Section 1.7.5 Landscape Effects Matrix in <i>Appendix 14-1: LVIA Methodology</i>.</p>
<b>Mitigation Factors</b>	<p>Mitigation factors that reduce the potential for effects on landscape character were considered in determining the residual effect reported above:</p> <ul style="list-style-type: none"> <li>➤ The compatibility of LCA-17a to “Windfarm” land-use type is given as “High” (Table 6.2, p.50), which is the highest compatibility classification for wind energy development out of a five-tier compatibility scale—only two LCAs in the county have been given this capacity rating for the wind energy land-use type. This favourable compatibility rating indicates that the landscape is highly suitable for wind energy development.</li> <li>➤ LCA-17a is defined as having “<i>capacity to accommodate development without undue deterioration in the scenic quality</i>” (TCDP 2022-2028).</li> <li>➤ LCA-17a is classed as “<i>Medium Sensitivity</i>” such that “<i>Change or Development is generally acceptable</i>” because “<i>the landscape is somewhat degraded, so undergoing change or the precedent for such and similar development is set and the landscape is capable of absorbing considerable change without detriment</i>” (TCDP 2022-2028).</li> <li>➤ Effects on the key visual sensitivities of LCA-17a, being “<i>extensive views eastwards from elevated points across to Kilkenny and the south of the county</i>” and “<i>spectacular views towards the south taking in most of the County, from the area’s southern hilltops,</i>” are limited due to the nature of spatial enclosures among the marginal foothills terrain and extensive forestry which reduce visibility of the proposed turbines and cumulative turbines.</li> <li>➤ The uplands of Slieve Felim Mountain range and Knockbane peak is generally robust landscape characterised by small spatial enclosures and undulating terrain which has effectively absorbed multiple wind energy developments to date.</li> <li>➤ The proposed turbines will be viewed within a modified working landscape of agricultural fields and forestry that is currently well-established with wind energy development.</li> <li>➤ Material changes to the physical landscape as a result of the Proposed Wind Farm will take place within agricultural fields and forestry and to a small degree in public road corridors; these are all human-modified landscapes with limited natural landscape characteristics.</li> <li>➤ The small areas of LCA-17a classed as “Unsuitable” for wind energy development (TCDP WES 2022-2028) which align with the Proposed Grid Connection Route comprise the same human-modified landscapes of the Proposed Wind Farm (agricultural fields, forestry) and will be subject only to temporary landscape and visual effects associated with the Construction Phase of the Proposed Project.</li> </ul>

1.2

## County Limerick

1.2.1

### LCA-1: Agricultural Lowlands

Limerick LCA-1: Agricultural Lowlands	
<b>Map Ref.</b>	L-LCA-1
<b>Distance from the Site to Nearest/Furthest Area of LCA</b>	At its closest point, LCA-1 is located approx. 3.6km west of the Wind Farm stie. Approximately 12.7km of the underground Proposed Grid Connection Route runs through the northwest tip of this LCA, within the 15km LCA Study Area.
<b>LCA Key Characteristics</b>	<p>From the LDP 2022-2028 Chapter 6.4, Table 6.1 (p.185):</p> <ul style="list-style-type: none"> <li>➤ <i>“This is the largest of the Landscape Character Areas in Limerick and comprises almost the entire central plain.</i></li> <li>➤ <i>This landscape is a farming landscape and is defined by a series of regular field boundaries, often allowed to grow to maturity.</i></li> <li>➤ <i>This well-developed hedgerow system is one of its main characteristics.</i></li> <li>➤ <i>In terms of topography, the landscape is generally rather flat with some locally prominent hills and ridges.</i></li> <li>➤ <i>The pastoral nature of the landscape is reinforced by the presence of farmyards.”</i></li> </ul>
<b>LCA Capacity for Wind Energy Development</b>	<p>The LDP 2022-2028 Chapter 6.4, Table 6.1 (p.185) specific objectives relating to wind energy development within LCA-1; these are listed below. In terms of this assessment, the objectives are considered from a visual perspective only, since no infrastructure of the Proposed Project is located within the LCA:</p> <ul style="list-style-type: none"> <li>➤ <i>“Encourage the regular arrangement of turbines with equal spacing in proposed wind farm developments, which take field boundaries into account.</i></li> <li>➤ <i>Encourage retention of existing landscape features such as hedgerows and trees and their incorporation into landscaping for new developments.</i></li> <li>➤ <i>Discourage development of locally prominent sites.”</i></li> </ul>
<b>Landscape Sensitivity to Wind Farm Development</b>	<p><b>Sensitivity = Low.</b></p> <p>On balance, the sensitivity of LCA-1 to wind energy development is deemed to be Low. There are no sensitive landscape receptors within this LCA nor are there any designated scenic routes. As mentioned in the key characteristics of this LCA, there is a well-developed hedgerow system, which, in this flat landscape will help to screen and reduce the impact of developments in this landscape type. Given the suggested capacity of LCA-1 for wind energy development in the specific objectives listed above, it can be assumed that the LCA has capacity to absorb the related effects of wind energy development from a visual perspective in this case.</p> <p>Refer to Section 1.7.3 Sensitivity of Landscape Character Areas in <i>Appendix 14-1: LVIA Methodology.</i></p>

Limerick LCA-1: Agricultural Lowlands	
<b>Visibility of the Proposed Project from within the LCA</b>	<p>The ZTV map (Figure 14-8 in Chapter 14) shows a large area of theoretical visibility to the south of LCA-1; there is no theoretical visibility to the north of this LCA due to visual screening from topography to the west of the proposed turbines. On-site appraisals found that due to the distance of this LCA from the proposed turbines and the degree of visual screening by vegetation throughout this LCA, the proposed turbines will most likely be intermittently visible in the background of views.</p> <p>Viewpoint VP12 is located within this LCA, &gt;15km from the proposed turbines which is outside the LCA Study Area boundary.</p>
<b>Cumulative Effects</b>	<p>The existing Knockastanna Wind Farm (4 no. turbines) is located in LCA-1 at the northern end of the portion of the LCA where it falls within the LCA Study Area; at a distance &gt;8km from the Proposed Wind Farm site. Owing to the distance between the developments and mountainous nature of the terrain, the two wind farms are not likely to be viewed together cumulatively.</p> <p>Several of the existing turbines within LCA-17a may be visible along with the proposed turbines from areas within this LCA.</p>
<b>Magnitude of Change</b>	<p><b>Magnitude = Slight.</b></p> <p><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>Refer to Section 1.7.4 Magnitude of Landscape Change in <i>Appendix 14-1: LVIA Methodology</i>.</p>
<b>Significance of Effect</b>	<p><b>Low × Slight = Minor/Negligible = “Not Significant” (EPA, 2022)</b></p> <p><i>“An effect which causes noticeable changes in the character of the environment but without significant consequences.”</i></p> <p>Refer to Section 1.7.5 Landscape Effects Matrix in <i>Appendix 14-1: LVIA Methodology</i>.</p>
<b>Mitigation Factors</b>	<p>Mitigation factors that reduce the potential for effects on landscape character were considered in determining the residual effect reported above:</p> <ul style="list-style-type: none"> <li>➤ Only underground infrastructure of the Proposed Grid Connection is located within this LCA, therefore material effects on the landscape will be temporary, localised and transient in nature, limited to the installation of grid connection components primarily along public corridors.</li> <li>➤ Following the Construction Phase of the Proposed Project, the material landscape effects on this LCA will be none, as the landscape will be</li> </ul>

Limerick LCA-1: Agricultural Lowlands	
	<p>allowed to return to its natural state of baseline character and condition.</p> <p>&gt; The key visual characteristics of the LCA being “<i>farming landscape</i>” defined by “<i>a series of regular field boundaries</i>” and “<i>well-developed hedgerow system</i>” are not affected by the location/distance of the proposed turbines, which are located in the foothills above the farming landscape and would be intermittently visible due to the dense nature of hedgerows.</p>



## **APPENDIX 14-2**

**END OF DOCUMENT**