



APPENDIX 14-2

LCA ASSESSMENT TABLES

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1. LANDSCAPE CHARACTER ASSESSMENT TABLES

This appendix comprises an impact assessment addressing the landscape effects of the Proposed Development upon each designated Landscape Character Area (LCA) which has been scoped in for assessment in Section 14.4.4.1: ‘Designated Landscape Character Areas Preliminary Analysis’ of Chapter 14. The impact assessment for each LCA is set out in its own table below. Discussion of theoretical visibility in each LCA refers to ZTV mapping, thus it is recommended that the impact assessments in this appendix are read in conjunction with Figure 14-17: ‘LCA & ZTV Map’. Figure 14-17 illustrates the boundary of each LCA under assessment and is overlain by a ZTV extending 15km from the proposed turbines to include the ‘LCA Study Area’, the study area for assessment of effects on designated Landscape Character Areas (see Section 1.1.2 of Appendix 14-1: *LVIA Methodology*).

2. COUNTY CLARE LANDSCAPE CHARACTER AREAS

Reference is made to the Landscape Character Assessment of County Clare 2004 (hereafter, LCACC), as well as the Clare Wind Energy Strategy (CWES) which forms Volume 6 of the Clare County Development Plan 2023–2029 (CCDP). Chapter 4 of the CWES is called ‘Advice on Landscape Capacity for Wind Energy Developments based on Landscape Character Areas (LCA’s)’; it includes specific information about the sensitivity of each LCA in relation to wind energy development and has informed the impact assessments in the tables below.

2.1 Clare LCA 8 - Slieve Bernagh Uplands

Clare LCA 8 – Slieve Bernagh Uplands (Map Reference: C-LCA 8)	
Distance from site to Nearest/Furthest Area of LCA	All of the proposed turbines are located within this LCA. At its furthest point, the LCA extends approximately 16.8km northeast of turbine T5. A majority of the proposed Grid Connection is located in this LCA.
LCA Key Characteristics <i>(As reported in the LCACC, which forms part of the CCDP)</i>	<ul style="list-style-type: none"> > <i>‘Area of gentle and rolling hills reaching 530m at Sliabh Bernagh.</i> > <i>Settlement is scattered, confined to lower fringes.</i> > <i>Hedgerows create a wooded feel and are often planted with fuchsia around dwellings.</i> > <i>Historically little settlement other than ritual, as evidenced by a number of cairns, barrows and standing stones identified on the eastern slopes. Broadford Gap is an important Bronze Age passing route.</i> > <i>Remote and isolated with panoramic views afforded to Lough Derg, lower drumlin farmland and Shannon estuary.</i> > <i>Vegetation dominated by heather moorland with plantation forests and semi-natural deciduous woodland on lower slopes and along water courses’.</i>
LCA Capacity for Wind Energy <i>(As reported in Table 4a of the CWES, which forms Volume 6 of the CCDP)</i>	> <i>‘There are certain parts of this LCA that are highly sensitive due to their nature designations and scenic qualities. In particular, the foothills and mountains over-looking Lough Derg and the unenclosed bogs of Lackerragh and Glenvagalliagh Mountain.</i>

	<ul style="list-style-type: none"> > <i>However, other areas on the north west and westerly aspects of the mountain are more robust and can accommodate number of large or medium wind farms.</i> > <i>In the Broadford Hills areas, the areas around Woodcock Hill, Ballycar, Corlea and Knockaunnamoughily are identified as Strategic Areas’.</i>
<p>Landscape Sensitivity to Wind Farm Development</p>	<p>‘Low’: Table 4a in Chapter 4 of the CWES gives this LCA a ‘Medium to Low’ overall sensitivity to wind farm development, which is the lowest sensitivity designation/category attributed to any LCAs in Co. Clare in the CWES. Table 4a of the CWES also determines that the ‘<i>appropriate size of Wind Farms (turbine numbers)</i>’ in this LCA is ‘Large’. Considering the direction in local planning policy designations, this LCA is deemed to be of ‘Low’ sensitivity.</p>
<p>Visibility of the Proposed Development within the LCA</p>	<p>The ZTV indicates large areas of full theoretical visibility in the central belt of this LCA within 5km of the proposed turbines. There is no theoretical visibility in most of the northeastern portion of the LCA in proximity to Lough Derg. There is very limited theoretical visibility of the proposed turbines in the south-west of the LCA where visibility is obscured by defined ridgelines around Woodcock Hill. In general, most visibility of the Proposed Development occurs within close proximity to the proposed turbines, and as the proposed turbines are all sited in this LCA, photomontage imagery was captured from a large number of viewpoints in this LCA (a total of 28.) Eight No. viewpoints are included in the EIAR Volume 2: <i>Photomontage Booklet</i> (VPs: 1, 2, 3, 7, 10, 12, 13 and 15) and additional imagery from the remaining 21 No. viewpoints are presented as photowires (early stage photomontages) in Appendix 14-4: <i>Photowire Booklet</i>.</p>
<p>Cumulative Effects</p>	<p>This LCA comprises all ‘Strategic Areas’ and ‘Acceptable in Principle’ areas for wind energy development in East Clare. Consequently, there are a number of other permitted and proposed wind energy developments in this LCA. All other wind farms in the Slieve Bernagh uplands are identified and mapped in Section 14.6: ‘Cumulative Context’ of Chapter 14.</p> <p>The permitted Carrownagown Wind Farm is located to the north of the LCA, separated from the Proposed Development by 6km and several substantial landform features. The proposed Oatfield Wind Farm is located upon the same area of upland as the proposed Knockshanvo Development. The permitted Fahy Beg wind farm proposed Lackareagh Wind Farm are located in the adjacent valley to the east, and the proposed Ballycar Wind Farm is located in the adjacent valley to the south, also separated by well-defined ridgelines. Excepting Carrownagowan and Fahy Beg, many of these developments are ‘proposed’ and their likelihood of influencing cumulative effects on this LCA are reliant upon many factors, including the outcome of the consenting system.</p> <p>All of these developments in combination with the Proposed Development have the potential to contribute to cumulative landscape effects on this LCA. However, this is to be anticipated considering the policy designations in local planning policy (Table 4a of the CWES) and characteristics of this upland landscape type, which has been</p>

	designated as having the capacity to absorb multiple wind energy developments.
<p>Magnitude of Change (Definition – from Table 1-3 in Section 1.6.1.3: ‘Magnitude of Landscape Change’ of Appendix 14-1: LVIA Methodology)</p>	<p>Moderate: ‘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.’</p>
<p>Significance of Effect</p>	<p>Low × Moderate = Minor = Slight (EPA, 2022) ‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities’.</p>
<p>Mitigating Factors</p>	<ul style="list-style-type: none"> ➤ All of the proposed turbines (except T3) are sited in an area of this LCA designated as ‘Strategic Area’ for wind energy development in the CWES. The remaining turbine T3 is sited in a location designated as ‘Acceptable in Principle’; however, it is enclosed to the north, south and east by areas designated as ‘Strategic Areas’ by distances of approximately 80m. ➤ As detailed throughout Chapter 14, the narrow and enclosed nature of the vegetated valleys surrounding the site greatly reduce the likelihood of the turbines being seen within the landscape, in comparison to the theoretical visibility illustrated by the ZTV. ➤ The Proposed Development is sited in the Broadford Hills area of the LCA, an area identified in Table 4a of the CWES as having the capacity to absorb large- and medium-scale wind energy developments. ➤ The Proposed Development has a limited effect on key landscape sensitivities proximate to this LCA including Co. Clare designated ‘Heritage’ landscapes around Lough Derg to the north-east and the Shannon Estuary to the south-west. ➤ The proposed turbines will alter the character of the central portion of this LCA and the character of some locally sensitive panoramic views from the 12 O’Clock Hills. However, as detailed in Section 14.7.3.3.3: ‘Discussion of Visibility and Visual Effects on Specific Visual Receptors in the LVIA Study Area’ of Chapter 14, the Proposed Development includes for amenity trails which provide recreational accessibility to new areas of the 12 O’Clock Hills. Through careful design, these amenity trails will provide access to locations comprising elevated panoramic views of the wider landscape of high scenic quality which will have limited impact and intrusion from the proposed turbines and other wind energy development in this LCA.

Clare LCA 9 - River Shannon Farmlands

Clare LCA 9 – River Shannon Farmlands (Map Reference: C -LCA 9)	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 4.4km south of the nearest proposed turbine (T7). The EIAR Site Boundary of the Proposed Development extends into this LCA from the north where the proposed Grid Connection route follows a 3km stretch of local road in a southerly direction, where it connects to the grid in the townland of Ardnacrusha within this LCA.
LCA Key Characteristics <i>(As reported in the LCACC, which forms part of the CCDP)</i>	<ul style="list-style-type: none"> ➤ <i>‘Lowland farming area with meandering River Shannon providing key focus.</i> ➤ <i>Small settlements/villages such as Parteen and Cloonlara.</i> ➤ <i>Agricultural, rural landscape with intact features and well maintained.</i> ➤ <i>Framed by undulating lowland farmland with Sliabh Bernagh and Broadford Hills in the distance.</i> ➤ <i>O’Briensbridge is an Architectural Conservation Area (ACA).’</i>
LCA Capacity for Wind Energy <i>(As reported in Table 4a of the CWES, which forms Volume 6 of the CCDP)</i>	<ul style="list-style-type: none"> ➤ <i>‘There is some capacity in the southern part of this LCA for development away from Lough Derg and Killaloe.</i> ➤ <i>Small or medium wind farms would be most appropriate.</i> ➤ <i>Due to the low lying nature of the LCA, lower turbine height would be most appropriate.’</i>
Landscape Sensitivity to Wind Farm Development	Medium: This LCA is given a ‘Medium’ sensitivity to wind farm development by the CWES. The appropriate size of wind farm for this LCA is designated by the CWES as ‘Small or Medium’.
Visibility of the Proposed Development within the LCA	<p>The ZTV shows theoretical visibility in the central portion of this LCA, to the south-east of the Proposed Development in an area of the landscape between the settlements of Parteen and Castleconnel. There is no theoretical visibility to the west of the LCA, in or around the Shannon Estuary. To the north-east, there is an area of theoretical visibility east of Bridgetown and north of O’Briensbridge. There is no theoretical visibility to the north-east of the LCA in proximity to Killaloe or Lough Derg. Visibility appraisals conducted during site visits determined that visibility of the proposed turbines from within this LCA is likely to be far less than is indicated by the ZTV, particularly from low-lying receptors such as the Shannon River and the town of O’Briensbridge, where screening from mature vegetation and localised landform will limit views towards the Proposed Development. Photowire PW-O is located in this LCA (see Appendix 14-4).</p> <p>The Grid Connection route is located along a 3km stretch of local road in this LCA. The route will be underground and landscape effects will be limited to the construction phase.</p>
Cumulative Effects	<p>No other existing, permitted or proposed wind energy developments are located in this LCA.</p> <p>The proposed Ballycar Wind Farm and proposed (under appeal) Fahy Beg Wind Farm are located in close proximity to this LCA, beyond</p>

	the northern boundary. In a future receiving environment, there is a likelihood that turbines from these developments will be visible from within this LCA. However, it is unlikely that the Proposed Development will have in-combination visibility with these developments from key sensitive receptors in this LCA; therefore, no significant cumulative effects are likely to occur due to the Proposed Development.
Magnitude of Change (Definition – from Table 1-3 in Section 1.6.1.3: ‘Magnitude of Landscape Change’ of Appendix 14-1: LVIA Methodology)	<i>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. The effects could potentially be medium to short term and/or reversible.’</i>
Significance of Effect	Medium × Slight = Minor = Slight (EPA, 2022) <i>‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities’.</i>
Mitigating Factors	<ul style="list-style-type: none"> ➤ When visible from within this LCA, almost all of the proposed turbines (except T3) are sited and viewed in an area of the landscape designated as ‘Strategic Area’ for wind energy development in local planning policy (CWES). ➤ The proposed turbines are not located in this LCA and are set-back several kilometres from receptors (>4km). ➤ Due to set-back distances and the actual nature of visibility likely to occur in this LCA, the Proposed Development will have a very limited impact on the key characteristics and sensitivities of the landscape of this LCA, such as the Shannon River Corridor.

2.3

Clare LCA 10- Sixmilebridge Farmland

Clare LCA 10 – Sixmilebridge Farmland (Map Reference: C-LCA 10)	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 2.6km west of the nearest proposed turbine (T1) and approximately 17km at the furthest point from the nearest proposed turbine.
LCA Key Characteristics (As reported in the LCACC, which forms part of the CCDP)	<ul style="list-style-type: none"> ➤ <i>‘An undulating, well maintained landscape, with the principal river of Owengamey draining from Doon Lough in the north.</i> ➤ <i>An area of considerable archaeological and historical interest testifying to its strategic location and good land resources.</i> ➤ <i>Principal roads cross through this area such as the N18 and there is a significant urban and commercial centre at Shannon, as well as the smaller settlement of Sixmilebridge.</i> ➤ <i>Quin and Sixmilebridge are designated ACA (Architectural Conservation Areas)’.</i>
LCA Capacity for Wind Energy	<ul style="list-style-type: none"> ➤ <i>‘There is some capacity in the undulating more enclosed parts of this LCA to accommodate small or medium wind farms.</i> ➤ <i>The industrial area around Shannon Free zone may offer potential for auto-production developments. Any developments</i>

<p>(As reported in Table 4a of the CWES, which forms Volume 6 of the CCDP)</p>	<p>would have to conform to land use guidance from Shannon Airport’.</p>
<p>Landscape Sensitivity to Wind Farm Development</p>	<p>Medium: This LCA is given a ‘Medium’ sensitivity to Wind Farm Development by the CWES. The appropriate size of wind farm is for this LCA is designated by the CWES as ‘Small or Medium’.</p>
<p>Visibility of the Proposed Development within the LCA</p>	<p>The ZTV shows theoretical visibility in most of this LCA. Some areas of the LCA comprise theoretical visibility of all proposed turbines, whereas areas in proximity to the Proposed Development (north-east of the LCA) and within the northern portion of the LCA indicate theoretical visibility of 3 or 6 turbines.</p> <p>Photomontage viewpoints VP8 and VP9 are located in this LCA. The key characteristics and capacity of this LCA identified in the LCAAC and CWES report undulating characteristics of the landform which creates a sense of enclosure in this LCA. Site visits and photomontage visualisations verified that localised landform and mature vegetations limits visibility of the proposed turbines and actual visibility is likely to be far less than is indicated by the ZTV.</p>
<p>Cumulative Effects</p>	<p>No other existing, permitted or proposed wind energy developments are located in this LCA. No ‘Significant’ cumulative effects are likely to occur.</p>
<p>Magnitude of Change (Definition – from Table 1-3 in Section 1.6.1.3: ‘Magnitude of Landscape Change’ of Appendix 14-1: LVIA Methodology)</p>	<p><i>‘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. The effects could potentially be medium to short term and/or reversible.’</i></p>
<p>Significance of Effect</p>	<p>Medium × Slight = Minor = Slight (EPA, 2022) <i>‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities’.</i></p>
<p>Mitigating Factors</p>	<ul style="list-style-type: none"> ➤ The Proposed Development is not located in this LCA and will not materially alter the physical fabric of this landscape. ➤ When visible from within this LCA, almost all of the proposed turbines (except T3) are sited in an area of the landscape designated as ‘Strategic Area’ for wind energy development in local planning policy (CWES). ➤ Due to set-back distances and the actual nature of visibility likely to occur in this LCA, the Proposed Development will have a limited impact on the key characteristics and sensitivities of the landscape of this LCA, such as Cultural Heritage receptors in proximity to the Shannon Estuary in Co. Clare ‘Heritage’ landscape. For example, photowire PW-Y (Appendix 14-4) was captured in proximity to Bunratty Castle, showing that the proposed turbines are visible as distant features in the background of the landscape but are not likely to significantly impact the landscape setting of the castle or other heritage receptors in this area of the LCA.

Clare LCA 11- East Clare Loughlands

Clare LCA 11 East Clare Loughlands (Map Reference: C -LCA 11)	
Distance from site to Nearest/Furthest Area of LCA	<p>At its closest point, this LCA is located approximately 1km north-west of the nearest turbine (T2). The LCA extends approximately 18km to the north-east at its furthest point from the nearest proposed turbine (T8). A very small portion (0.05km) of the EIAR Study Area is located in this LCA.</p>
LCA Key Characteristics <i>(As reported in the LCACC, which forms part of the CCDP)</i>	<ul style="list-style-type: none"> ➤ <i>‘The landscape is an attractive mosaic of loughs, farmlands and occasional limestone outcrops reflected in the presence of stone walls.</i> ➤ <i>The area is predominately rural in character dissected by quiet minor roads, increasingly busy towards Sixmilebridge and Limerick.</i> ➤ <i>Settlement is traditional and scattered across the area in the form of single and two storey isolated dwellings, punctuated by small, nucleated settlements such as Bodyke and Kilkishen.</i> ➤ <i>An intact rural feel, declining towards the southern end; views are frequently limited due to drumlins, strong presence in the landscape’</i>
LCA Capacity for Wind Energy <i>(As reported in Table 4a of the CWES, which forms Volume 6 of the CCDP)</i>	<ul style="list-style-type: none"> ➤ <i>‘The enclosed drumlin landscape offers some capacity for wind farms though the small scale of the landscape would support small wind farms only’.</i>
Landscape Sensitivity to Wind Farm Development	<p>Medium: This LCA is given a ‘Medium to High’ sensitivity to wind farm development by the CWES. This LCA does not comprise any Co. Clare ‘Heritage’ landscape designation of ‘High’ sensitivity. On balance, the sensitivity is deemed to be ‘Medium’.</p>
Visibility of the Proposed Development within the LCA	<p>The ZTV shows widespread theoretical visibility of 3 and 6 turbines in the central portion of this LCA nearest the Proposed Development where there is a relatively flat and open plain. There is some intermittent theoretical visibility of all 9 No. proposed turbines to the north of the LCA. Photomontage viewpoints VP4, VP14 and VP16 (see <i>Photomontage Booklet</i>) are located in this LCA, as well as photowire PW-K (see Appendix 14-4).</p> <p>Whilst there are some open views of the proposed turbines from receptors within the landscape of this LCA, the key characteristics of the LCA (from the LCAAC) state; <i>‘views are frequently limited due to drumlins, strong presence in the landscape’</i>. Site visits determined that the weaving and undulating nature of the landform to the north-east and south-west of the LCA limit visual exposure of the proposed turbines excepting from elevated vantage points and in general, the visibility is far less than is indicated by the ZTV, thus effects upon the wider landscape of the LCA are likely to be far less than is shown in the photomontage visualisations.</p>

Cumulative Effects	<p>No other existing, permitted or proposed wind energy developments are located in this LCA.</p> <p>Turbines of the permitted Carrownagowan Wind Farm are sited on the western slopes of Slieve Bernagh and are likely to be visible in combination with the Proposed Development from vantage points within this LCA.</p>
Magnitude of Change (Definition – from Table 1-3 in Section 1.6.1.3: ‘Magnitude of Landscape Change’ of Appendix 14-1: LVIA Methodology)	<p><i>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. The effects could potentially be medium to short term and/or reversible.’</i></p>
Significance of Effect	<p>Medium × Slight = Minor = Slight (EPA, 2022) <i>‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.’</i></p>
Mitigating Factors	<ul style="list-style-type: none"> ➤ The Proposed Development is not located in this LCA and will not materially alter the physical fabric of this landscape. ➤ When visible from within this LCA, almost all of the proposed turbines (except T3) are sited in an area of the landscape designated as ‘Strategic Area’ for wind energy development in local planning policy (CWES). ➤ There would likely be a substantial amount of visual separation between the permitted Carrownagowan Wind Farm and the Proposed Development. The two developments are each appropriately set-back and sited in landscape types of a larger scale which are capable of absorbing wind energy. Whilst turbines will be seen in the distance, no ‘Significant’ cumulative effects are likely to occur on the character of this LCA.

2.5

Clare LCA 12- Tulla Drumlin Farmland

Clare LCA 12 – Tulla Drumlin Farmland (Map Reference: C -LCA 12)	
Distance from site to Nearest/Furthest Area of LCA	<p>At its closest point, this LCA is located approximately 8.3km north from the nearest proposed turbine (T2) and approximately 17.9km at its furthest point from the nearest proposed turbine.</p>
LCA Key Characteristics (As reported in the LCACC, which forms part of the CCDP)	<ul style="list-style-type: none"> ➤ <i>‘Low drumlin area, farmed green hills and hedgerows.</i> ➤ <i>Small occasional scattered loughs.</i> ➤ <i>Network of small roads lined with hedges.</i> ➤ <i>Attractive area, rural low lying and enclosed.</i> ➤ <i>Limited views due to drumlins and hedgerows.</i> ➤ <i>Montbrechia (Crocasmia × crocosmiflora) found along road verges.’</i>

<p>LCA Capacity for Wind Energy (As reported in Table 4a of the CWES, which forms Volume 6 of the CCDP)</p>	<p>➤ <i>‘The landform offers capacity to accommodate wind farms that reflect the small to medium scale of the area.’</i></p>
<p>Landscape Sensitivity to Wind Farm Development</p>	<p>Medium: This LCA is given a ‘Medium’ sensitivity to wind farm development by the CWES, which is confirmed by the appraisals of this LVIA. On balance, the sensitivity is deemed to be ‘Medium’.</p>
<p>Visibility of the Proposed Development within the LCA</p>	<p>The ZTV maps shows intermitted pockmarks of full, partial and no theoretical visibility across the LCA, as is typically seen across drumlin landscapes. Site visits determined that actual visibility of the proposed turbines will be quite limited due to the undulating nature of the landscape, excepting from elevated vantage points atop drumlins where open and long ranging views are permitted. Photowire PW-W was captured in this LCA (see Appendix 14-4).</p>
<p>Cumulative Landscape Effects</p>	<p>No other existing, permitted or proposed wind energy developments are located in this LCA.</p>
<p>Magnitude of Change (Definition – from Table 1-3 in Section 1.6.1.3: ‘Magnitude of Landscape Change’ of Appendix 14-1: LVIA Methodology)</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>Medium × Slight = Minor = Slight (EPA, 2022) <i>‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities’.</i></p>
<p>Mitigating Factors</p>	<p>➤ The Proposed Development is not located in this LCA and will not materially alter the physical fabric of this landscape.</p> <p>➤ When visible from within this LCA, almost all of the proposed turbines (except T3) are sited in an area of the landscape designated as ‘Strategic Area’ for wind energy development in local planning policy (CWES).</p> <p>➤ Excepting the small amount of vegetation screening shown in photowire PW34 (see Appendix 14-4), the photowire is representative of open views of the proposed turbines which can occasionally be found in this LCA. The turbines will be seen as small background features upon the distant ridgeline and turbines of the Eastern and Central Clusters will be partially screened from view by intervening landforms.</p>

Clare LCA 13- Ennis Drumlin Farmland

Clare LCA 13 – Ennis Drumlin Farmland (Map Reference: C -LCA 13)	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 10.5km west of the nearest proposed turbine (T2) and approximately 28km at its furthest point from the nearest proposed turbine.
LCA Key Characteristics <i>(As reported in the LCACC, which forms part of the CCDP)</i>	<ul style="list-style-type: none"> ➤ <i>‘Settlement of Ennis is the focal point of the area where both historical and modern development is apparent.</i> ➤ <i>Ennis situated within drumlin farmland, drumlins-oriented northeast to southwest punctuated by small loughs.</i> ➤ <i>Area can be disorientating due to many small winding roads and limited views.</i> ➤ <i>Communication centre for the region with Ennis as county town, with Fergus River running through the town’.</i>
LCA Capacity for Wind Energy <i>(As reported in Table 4a of the CWES, which forms Volume 6 of the CCDP)</i>	<ul style="list-style-type: none"> ➤ <i>‘Due to its status as County town and the key communication routes, this area has a significant residential population.</i> ➤ <i>Wind farm developments should be limited in height to avoid overpowering existing buildings close to urban centres.</i> ➤ <i>The more rural areas could accommodate small wind farms’.</i>
Landscape Sensitivity to Wind Farm Development	High: This LCA is given a ‘High’ sensitivity to wind farm development by the CWES due to its proximity to the County Hub town of Ennis.
Visibility of the Proposed Development within the LCA	Only a very small portion of this LCA (approximately 18km ²) is located in the LCA Study Area for assessment of effects on landscape character. This area of the LCA shows intermitted patches of full, partial and no theoretical visibility on the ZTV map, as is typically seen across drumlin landscapes. Site visits determined that actual visibility of the proposed turbines is likely to be very limited from this LCA.
Cumulative Landscape Effects	No other existing, permitted or proposed wind energy developments are located in the portion of this LCA which is located in the LCA Study Area.
Magnitude of Change <i>(Definition – from Table 1-3 in Section 1.6.1.3: ‘Magnitude of Landscape Change’ of Appendix 14-1: LVIA Methodology)</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. The effects could be short term and/or reversible.’</i>
Significance of Effect	High × Negligible = Minor = Slight (EPA, 2022) <i>‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities’.</i>
Mitigating Factors	<ul style="list-style-type: none"> ➤ The Proposed Development is not located in this LCA and will not materially alter the physical fabric of this landscape.

	<p>➤ Almost all of the proposed turbines (except T3) are sited and viewed in an area of the landscape designated as ‘Strategic Area’ for wind energy development in local planning policy (CWES).</p>
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3.

COUNTY LIMERICK LANDSCAPE CHARACTER AREAS

Chapter 6 of the Limerick Development Plan 2022–2028 (LDP) details information and mapping of the Landscape Character Assessment of Co. Limerick and the designated LCAs in the county. Information and mapping of LCAs is also included in the ‘*Environment, Heritage, Landscape & Green Infrastructure*’ which is a ‘Background Paper’ forming part of the LDP. Both documents list, map and describe 10 designated LCAs; of these, two were located in the LCA Study Area and one was screened in for assessment in Section 14.4.4.3 of Chapter 14, which is: LCA 06 – Shannon Coastal Zone.

‘Limerick City’ is mapped in both documents (Figure 6.1 in Chapter 6 of the LDP and Figure 6 of the Background Paper) but is not defined or listed as an LCA; instead, it is divided into four spatial zones called Urban Character Areas. Figure 6.1 of the LDP divides Limerick City into four zones: ‘Caherdavin’, ‘Southern Environs’, ‘Castletroy’ and ‘City’, whereas Figure 6 of the Background Paper maps all of these areas collectively as ‘Limerick City Administrative Area’. The landscape and visual effects of the Proposed Development from Limerick City and its environs are comprehensively assessed in Chapter 14 with the aid of photomontage visualisations. Considering the analysis and detailed assessments in the chapter, it is not deemed necessary to include an impact assessment table for each Urban Character Area of Limerick City in this appendix.

3.1

Limerick LCA 06- Shannon Coastal Zone

Limerick LCA 06 – Shannon Coastal Zone (Map Reference: L -LCA 6)	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this L-LCA is located approximately 7.5km south-east of the nearest proposed turbine (T9).
LCA Key Characteristics <i>(As reported from the LDP)</i>	<ul style="list-style-type: none"> ➤ <i>‘This zone comprises a large area of northern Limerick and is bounded on one side by the Shannon Estuary, while its southern boundary is defined by the gradually rising ground, which leads onto the agricultural zone and the western hills to the south west.</i> ➤ <i>The presence of the estuary is the defining characteristic of the region.</i> ➤ <i>The landscape itself is generally that of an enclosed agricultural type, essentially that of a hedgerow dominant landscape.</i> ➤ <i>This differs from the other agricultural landscapes of the County, in that the field patterns, particularly close to the Estuary, tend to be less regular than those elsewhere in Limerick.’</i>
LCA Objectives in Relation to Wind Energy <i>(As reported from the LDP)</i>	<i>‘Where wind farms are permitted, it is recommended that single lines of equally spaced turbines shall be considered, in order to limit the visual and landscape impact.’</i>
Landscape Sensitivity to Wind Farm Development	Medium: Co. Limerick does not allocate or designate sensitivity to LCAs in the county. This LCA includes some valuable and sensitive landscape receptors such as the River Shannon and Shannon Estuary.

	<p>The portion of this LCA located in the LCA Study Area (15km for the assessment of landscape character) comprises the urban fringe of Limerick City and settled farmland south of the Shannon, it is very similar in character to Clare LCA 9 – River Shannon Farmlands which is of ‘Medium’ sensitivity. On balance, this LCA is deemed to be of ‘Medium’ sensitivity.</p>
<p>Visibility of the Proposed Development within the LCA</p>	<p>There is full theoretical visibility of the proposed turbines in the north-east of the LCA in and around Limerick City, and there is no theoretical visibility to the west along the Shannon Estuary. Visibility appraisals conducted during site visits determined that visibility of the proposed turbines from within this LCA is likely to be far less than is indicated by the ZTV due to screening from the built environment, localised landform and mature vegetation. Photomontage viewpoint VP5 and photowire PW-R are located in this LCA and are representative of relatively open views of the Proposed Development where they are available in this LCA.</p>
<p>Cumulative Effects</p>	<p>Two single-turbine developments are existent in this LCA as follows: The ‘Vistakon’ turbine is visible in and around the townland of Castletroy, while the ‘Knockballynameath’ turbine is visible in the townland of Kilquane. No other existing, permitted or proposed wind energy developments are located in this LCA. In a possible future scenario, the proposed Ballycar turbines are likely to be visible to the north from within this LCA and similar to the Proposed Development, they are set-back an appropriate distance within an upland landscape to the north of the Shannon River. Consequently, no ‘Significant’ cumulative effects are likely to occur on the character of this LCA.</p>
<p>Magnitude of Change (Definition – from Table 1-3 in Section 1.6.1.3: ‘Magnitude of Landscape Change’ of Appendix 14-1: LVIA Methodology)</p>	<p><i>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. The effects could potentially be medium to short term and/or reversible.’</i></p>
<p>Significance of Effect</p>	<p>Medium × Slight = Minor = Slight (EPA, 2022) <i>‘An effect which causes noticeable changes in the character of the environment without affecting its sensitivities’.</i></p>
<p>Mitigating Factors</p>	<ul style="list-style-type: none"> ➤ The Proposed Development is not located in this LCA and will not materially alter the physical fabric of this landscape. ➤ When visible from within this LCA, almost all of the proposed turbines (except T3) are sited and viewed in an area of the landscape designated as ‘Strategic Area’ for wind energy development in local planning policy (CWES). ➤ The proposed turbines are not located in this LCA and are set-back several kilometres from receptors (>7km). ➤ Due to set-back distances and the actual nature of visibility likely to occur in this LCA, the Proposed Development will have a very limited impact on the key characteristics and sensitivities of the landscape of this LCA, such as the Shannon River Corridor.

4. COUNTY TIPPERARY LANDSCAPE CHARACTER AREAS

Reference in this section is made to landscape designations and terminology in the Tipperary County Development Plan 2022–2028 (TCDP) as well as the TCDP ‘Volume 3: Landscape Character Assessment & Schedule of Routes and Views’ (TCDP Vol. 3). Both documents list, map and describe 23 designated LCAs; of these, three were located in the LCA Study Area and one was scoped in for assessment in Section 14.4.4.1 of Chapter 14, which is: LCA 12 – River Shannon – Newport.

4.1 Tipperary LCA 12- River Shannon - Newport

Tipperary LCA 12 – River Shannon – Newport (Map Reference: T -LCA 12)	
Distance from site to Nearest/Furthest Area of LCA	At its closest point, this LCA is located approximately 8.5km east of the nearest proposed turbine (T9).
LCA Key Characteristics <i>(From the TCDP Vol. 3 ‘Landscape Character Assessment & Schedule of Views and Routes’)</i>	<ul style="list-style-type: none"> ➤ <i>‘Diverse landforms with rolling hills, broad valley, river plain and raised bogs creating a varied landscape.</i> ➤ <i>Strong westwards orientation towards County Limerick and the River Shannon.</i> ➤ <i>Long history of providing access with N7 alignment following ancient Sli Dala route; the access is further reinforced by the alignment of the Dublin to Limerick railway corridor.</i> ➤ <i>Proximity to Limerick results in quite heavy settlement and noticeable amount of new buildings, however nucleated settlements are limited to Newport town and Birdhill.</i> ➤ <i>Undulating hills create an intimate landscape with occasional views from elevated points afforded eastwards to the Silvermines and Arra Mountains.</i> ➤ <i>Lower boggy areas create remote landscape offering contrast with more heavily settled hilly areas’</i>
Landscape Sensitivity to Wind Farm Development	<p>Medium: The TCDP designates this LCA as having a large range of sensitivity ratings, with a dominant sensitivity rating of <i>Class 4 – Transitional Vulnerability</i>, although it is noted that there is a range of sensitivities in this LCA as designated in the TCDP, with designated sensitivities between <i>Class 1 – Normal</i> and <i>Class 5 – Vulnerable</i>. It is noteworthy in relation to the landscape sensitivity to wind farm development that there are no designated Primary or Secondary Amenity in this LCA. In relation to land-use compatibility in the TCDP, this LCA is designated as <i>Least</i> compatible to windfarm land use. In consideration of consistency across county boundaries, this LCA was analysed in the field and was found to comprise similar indicators of landscape value and sensitivity as the adjacent Limerick LCA 6 - Shannon Coastal Zone.</p> <p>Taking into account all factors outlined above, this LCA is deemed to be of ‘Medium’ sensitivity.</p>
Visibility of the Proposed Development within the LCA	There is full theoretical visibility in large areas of this LCA in the LCA Study Area (15km for assessment of effects on landscape character), as well as some areas of no theoretical visibility and theoretical visibility

	of 3 turbines to the north, near Killaloe. Visibility appraisals determined that the most open views of the proposed turbines will occur from elevated vantage points in this LCA as the land rises slightly to the east from the River Shannon and its floodplain; photowires PWQ and PWP were captured from such locations in this LCA where open views were found to the west across the Shannon River valley.
Cumulative Effects	No other existing, permitted or proposed wind energy developments are located in this LCA. No 'Significant' cumulative effects are likely to occur on the character of this LCA.
Magnitude of Change (Definition – from Table 1-3 in Section 1.6.1.3: 'Magnitude of Landscape Change' of Appendix 14-1: LVIA Methodology)	<i>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. The effects could potentially be medium to short term and/or reversible.'</i>
Significance of Effect	Medium × Slight = Minor = Slight (EPA, 2022) <i>'An effect which causes noticeable changes in the character of the environment without affecting its sensitivities'.</i>
Mitigating Factors	<ul style="list-style-type: none"> ➤ The Proposed Development is not located in this LCA and will not materially alter the physical fabric of this landscape. ➤ When visible from within this LCA, almost all of the proposed turbines (except T3) are sited and viewed in an area of the landscape designated as 'Strategic Area' for wind energy development in local planning policy (CWES). ➤ The proposed turbines are not located in this LCA and are set back several kilometres from receptors (>8km). ➤ Due to set-back distances and the actual nature of visibility likely to occur in this LCA, the Proposed Development will have a very limited impact on the key characteristics and sensitivities of the landscape of this LCA such as the Shannon River Corridor.