

Oulart Hill	
Do-Nothing Scenario	In a Do-Nothing Scenario, the existing 11 no. turbines of the Proposed Development will be decommissioned when their planning permission expires in 2025. In a Do-Nothing Scenario, these turbines will not be visible within this LCU, reducing the number of turbines effecting the landscape of this LCU.
Cumulative Context	There are no other existing permitted or existing turbines within this LCU.
Cumulative Landscape Effects	As seen from the Comparative Cumulative ZTV (Figure 13-16) there is theoretical visibility of other wind farm developments with the existing turbines. There are no areas within this LCU where there is only visibility of the existing turbines. On site appraisals determined that, due to the distance and vegetation on Oulart Hill, there is very limited visibility of the existing turbines from within the majority of this LCU and it therefore has a very limited contribution to cumulative effects on the landscape character.
Magnitude of Change (Definition from Section 13.2.5.2.2 of this report)	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. The effects could be short term and/or reversible.
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	<ul style="list-style-type: none"> ➤ As seen in the ZTV Mapping (Figure 13-3) there are large areas where there is no visibility of the existing turbines. ➤ Additionally, as discussed in Section 1.6.4 there is significant vegetation screening of the turbines from this LCU, particularly from treelines. ➤ Actual visibility is determined by direction of view, the existing turbines are only visible when facing a westerly direction.
Residual Effect	Not Significant (EPA, 2022) An effect which causes noticeable changes in the character of the environment but without significant consequences.

Table 13-16 Vinegar Hill Landscape Character Assessment Table

Vinegar Hill	
Distance from site to Nearest/Furthest Area of LCU	The existing turbines are located 11.km from the closest point of this LCU.
LCU Key Characteristics (County Wexford Landscape Character	<ul style="list-style-type: none"> ➤ <i>They represent features in the landscape and seascape which have visual interest and prominence.</i> ➤ <i>Are generally sensitive to development.</i>

Vinegar Hill	
Assessment 2022-2026)	<ul style="list-style-type: none"> ➤ <i>Are landscapes also have profound historical, socio- cultural and/or religious interest.</i> ➤ <i>A number of these hills, such as Oulart Hill, Lacken Hill, Vinegar Hill, Forth Mountain and Carrigbyrne have historical resonance.</i> ➤ <i>Hills and ridges have a significant presence all across County Wexford, and there are often broad views across the surrounding landscape from them</i>
Landscape Sensitivity to Wind Farm Development	The overall landscape sensitivity of the LCU in the WCDP is “High.” as designated in Table 7-3 within Volume 7 of the WCDP. Volume 10 of the WCDP designates wind energy developments as <i>Not Normally Permissible</i> within this LCU and the capacity for wind energy developments is <i>“Low capacity due to the scenic, tourism and recreation value, geological, archaeological or nature conservation interests”</i> . This LCU is therefore determined to have a High sensitivity to wind farm development.
Visibility of the Proposed Development within the LCU	As seen in ZTV Mapping (Figure 13-3) this LCU has predominantly full theoretical visibility of the existing turbines. However, there is a large area with no theoretical visibility. As this LCU is a Hill, the existing turbines are only visible from the highest points of elevation, and when facing in a north-westerly direction.
Do-Nothing Scenario	In a Do-Nothing Scenario, the existing 11 no. turbines of the Proposed Development will be decommissioned when their planning permission expired in 2025. In a Do-Nothing Scenario, these turbines will not be visible within this LCU, reducing the number of turbines effecting the landscape of this LCU.
Cumulative Context	There are no existing, proposed or permitted turbines within this LCU. Other wind farms in the Uplands LCU are visible in the background from elevated points on the summit of Vinegar Hill.
Cumulative Landscape Effects	As seen on the comparative ZTV, there is theoretical visibility of the existing Castledockrell turbines with other cumulative wind farm developments in the LVIA Study Area. From the summit of Vinegar Hill, the existing turbines will be visible in combination with other wind farm developments in the Uplands LCU. On site appraisals determined that, due to the distance and expansive views from the summit of Vinegar Hill, no significant cumulative landscape effects are like to arise as a result of the continued operation of the Castledockrell Wind Farm.
Magnitude of Change (Definition from Section 13.2.5.2.2 of this report)	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.
Significance of Effect	High x Slight = Moderate/Minor = Moderate (EPA, 2022) An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends

Vinegar Hill	
Mitigating Factors	<ul style="list-style-type: none"> ➤ As seen in the ZTV Mapping (Figure 13-3) there are large areas where there is no visibility of the existing turbines. ➤ Additionally, as discussed in Section 13.6.4 there is a large amount of vegetation screening in the intervening landscape. Views from this hill are panoramic views and the existing turbines are barely distinguishable in the expansive landscape. ➤ Actual visibility is determined by direction of view, the existing turbines are only visible when facing a north westerly direction.
Residual Effect	<p>Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities</p>

Discussion of Landscape Effects on LCUs

As demonstrated in Table 13-11 above, no significant landscape effects are likely to occur in any of the LCUs within the LVIA Study Area. The Proposed Development is located in the Uplands LCU. The magnitude of change was deemed to be “Moderate” on landscape character within this LCU as a result of the Proposed Development. It is noted that this effect on landscape character is localised within the relatively small area (within 5km of the turbines) of this LCA where the existing turbines are visible, with the majority of this LCA located outside of the ZTV. The overall residual effect on this LCA was deemed to be ‘Moderate’.

Both Vinegar Hill and Oulart Hill are designated as ‘High’ sensitivity as they are Distinctive Landscapes within the WCDP. Due to distance and screening from vegetation throughout the landscape, actual visibility from locations within these Distinctive Landscape Character Units will be limited to areas of high elevation (i.e. The summit of these Hills). Residual effects were deemed to be ‘Slight’ for Vinegar Hill and ‘Imperceptible’ for Oulart Hill. No significant landscape effects are occurring at present on the Distinctive Landscapes within the LVIA Study Area and none will arise as a result of the extension of operation of the existing turbines.

The Proposed Development will not materially alter any of the other LCAs in the LVIA Study Area.

13.7.3.1.2 Cumulative Landscape Effects

The existing turbines contribute to a cumulative impact on the character of the Uplands LCU as a landscape where there are several other wind farm developments. After identifying the cumulative baseline for each LCU, the extent to which the extension of life of the existing Castledockrell turbines changes the landscape character of each LCU is described in the Assessment Tables above. Several existing and proposed turbines are located within the Uplands LCU (where the existing Castledockrell turbines are located). As seen in the comparative cumulative ZTV (Figure 13-16), there are very limited additional areas with theoretical visibility of turbines caused by the continued operation of the Castledockrell Wind Farm. The continued presence of the existing Castledockrell turbines will not change the existing landscape character of this LCU. In addition, given the presence of other wind farms, within and visible from this LCU, the decommissioning and removal of these turbines would marginally reduce visibility of wind turbines throughout this LCU. No significant cumulative landscape effects are deemed to arise at any LCU as a result of the continued operation of the Castledockrell Wind Farm.

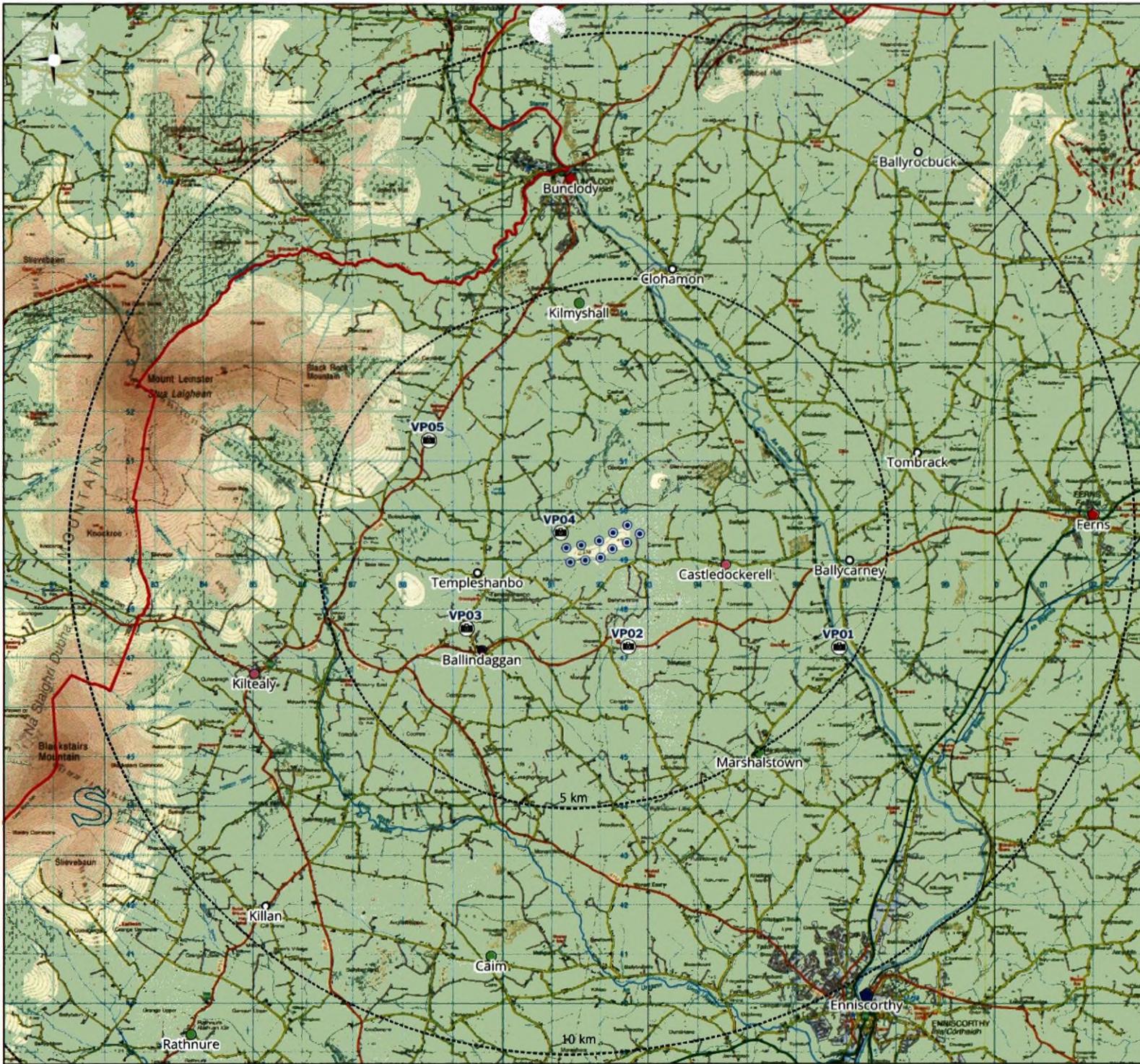
In a general sense this is a large, undulating, upland landscape with vegetation throughout the landscape, making it an acceptable area to absorb and accommodate many wind turbines. Due to the proximity of the existing turbines within the landscape, the existing Castledockrell turbines and other

existing wind farm developments appear as one large development from many locations, where there are views, within the LVIA Study Area. From areas within the wider LVIA Study Area, the turbines may be viewed as small features in the background of landscapes. The continued operations of the Castledockrell Wind Farm will not change the character of the landscape.

A description of the cumulative visual interactions between the Castledockrell turbines and other cumulative wind farms from visual receptors is included in Section 13.7.3.2 below.

13.7.3.2 Visual Effects

Photographic visualisations were used to aid the assessment of the visual effects arising as a result of the Proposed Development site from 5 no. viewpoint locations, which are presented in EIAR Volume 2: Photographic Visualisations Booklet. These 5 No. viewpoint locations are shown on Figure 13-17. The locations chosen for viewpoints follow a detailed and extensive process including review of baseline information, site visits and high-quality photo taking at multiple locations within the LVIA Study Area. Many locations, which based on a desktop review had the potential for views of the existing turbines, had complete intervening screening or were screened to such an extent that the completion of photographic visualisations was not considered useful in terms of the assessment process i.e., little or no visibility towards the existing turbines.



Map Legend

- ▭ County Borders
- Proposed Development Turbines
- Photographic Visualisation Viewpoint Locations
- Co. Wexford Settlement Hierarchy**
- ◆ Key Towns
- ◆ Large Towns
- ◆ Service Settlements
- ◆ Strategic Settlements
- Large Villages
- Small Villages Category 1
- Small Villages Category 2
- Rural Nodes

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Drawing No.

Figure 13-17

Drawing Title

Photographic Visualisation Viewpoint Locations

Project Title

Castledockerell Wind Farm Extension
 of Operational Life

Scale	Project No.	Date	Drawn By	Checked By
1:75,000	210847	05.03.2025	SF	JW



13.7.3.2.1 Viewpoint Assessment Tables

Table 13-17 Viewpoint 1 Photographic Visualisation Assessment Table

Viewpoint - 1 N80 National Road Skeahanagh			
Viewpoint Description and Details	<ul style="list-style-type: none"> ➤ View from N80 national road in the townland of Skeahanagh ➤ Approximately 4.5km east of the proposed turbine T3 ➤ Grid Reference E 692520 N 647291 ➤ Number of turbines visible: 11/11 		
LCU and Sensitivity	LCU- Lowland - Moderate	Visual Receptor(s) and Sensitivity	Motorists - Low Residents - Medium
'Current View' Description	<p>This image captured from the verge of the N80 National Road to the east of the site. Medium height hedgerows and shrubs align the road. Tall trees can be seen to the right of the image. Behind the hedgerows there is a field of agricultural land. There is a treeline that runs the length of the field, beyond which the topography rises, and an elevated ridgeline is just in the background centre of the view.</p> <p>The existing turbines are visible beyond the treeline in the centre background of the view upon the elevated ridgeline.</p>		
Proposed View with Cumulative Description	<p>From this viewpoint location, several of the existing turbines are visible in the background of the image, 8 no. turbines are clearly visible. The mature treeline Fully obscures 3 existing turbines from view and partially obscures the lower components of others</p> <p>The existing Castledockrell turbine T12 is visible in the wireline of this viewpoint but is not visible within this view due to vegetation screening.</p>		
Cumulative Effects	<p>No other existing, permitted or proposed turbines are visible from this location. No cumulative effects will arise.</p>		
Sensitivity of Visual Receptor(s) (Definition – from Section 13-2.8)	<p>Medium: <i>“Includes viewers who may have some susceptibility to a change in view. Viewers such as residents in medium proximity but who do not have views focused in the direction of the Proposed Development or whose views are not of a particularly scenic quality; those from views which are not designated but may have local recreational uses or those travelling along routes or at view which are considered moderately scenic.”</i></p> <p>This viewpoint has been given a medium sensitivity rating on account of the motorists traveling along the national road and the several residential dwellings located in the area</p>		
Magnitude of Change (Definition from Section 13-2.8)	<p>Slight: <i>“The proposals would be partially visible or visible at sufficient distance to be perceptible and result in a low level of change in the view and its composition and a low degree of contrast. The character of the view may be altered but will remain similar to the baseline existing situation. This change could be short term or of a short duration.”</i></p>		

Viewpoint - 1 N80 National Road Skeahanagh	
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"> ➤ The treeline that exists within this view partially screens the visibility of the turbines and creates a physical barrier between the national road and the Proposed Development. ➤ Many of the residential receptors will not have clear and open views (their primary residential visual amenity) in the direction of the Proposed Development site due to the vegetation present ➤ The existing turbines are well set back from this viewpoint and are only seen as small features in the background of the view. ➤ This is one of the only locations along this road where there are views towards as the majority of the road is screened by vegetation
Residual Effect (incl. mitigating factors)	Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities

Table 13-18 Viewpoint 2 Photographic Visualisation Assessment Table

Viewpoint 2- Clonjordan			
Viewpoint Description and Details	<ul style="list-style-type: none"> ➤ View from the R745 Regional Road in the townland of Clonjordan. ➤ Approximately 1.8m south of the nearest existing Castledockrell turbine T5. ➤ Grid Reference: 692520 N 647291 ➤ Number of turbines visible: 11/11 		
LCU and Sensitivity	LCU – Lowland – Moderate	Visual Receptor(s) and Sensitivity	Motorists – Low Residents – Medium
'Current View' Description	<p>This image was captured along the regional road R745 in the townland of Clonjordan. The view comprises an agricultural field bordered by low hedgerows and vegetation. This field in the foreground of the image slopes gently upwards to the right of the view. Beyond the hedgerow, the topography slopes upward to a ridgeline in the background of the image. The land cover is primarily comprised of agricultural fields delineated by hedgerows with trees scattered throughout the view. To the left of the image the Blackstairs mountains, including Mount Leinster, are visible in the background of the view. All 11 no. of the existing turbines are visible in the centre background of the view on top of the ridgeline of the hills.</p>		
Proposed View with Cumulative Description	<p>All 11 existing turbines of the Proposed Development are visible within the centre of the image on the hills' ridgelines. The turbines appear evenly spaced in the background of the view.</p> <p>The existing Castledockrell turbine T12 is visible on the wireline of this viewpoint but is not visible within this view due to the vegetation screening.</p>		
Cumulative Effects	<p>No other existing, permitted or existing turbines are visible from this location. No cumulative effects will arise.</p>		

Viewpoint 2- Clonjordan	
Sensitivity of Visual Receptor(s) (Definition – from Section 1.5.3 of Methodology Appendix 13-1)	<p>Low: <i>“Includes viewers engaged in activities where the focus is not on the landscape or view. These include those travelling along a busy route, viewers at work or engaged in sport not related to views or experience of the landscape.”</i></p> <p>This viewpoint is located along the R745 Regional Road with limited residential dwellings. Motorists travelling along this road will not be focused on the direction of the turbines, therefore, this viewpoint is deemed to be of Low sensitivity.</p>
Magnitude of Change (Definition from Section 1.5.3 of Methodology Appendix 13-1)	<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. The effects could be long to medium term and/or partially reversible.”</i></p>
Significance of Effect	<p>Low x Moderate = Minor = Slight (EPA, 2022)</p> <p>An effect which causes noticeable changes in the character of the environment without affecting its sensitivities</p>
Mitigation Factors	<ul style="list-style-type: none"> ➤ The turbines are sited strategically within a large, upland landscape type capable of accommodating a wind energy development of this scale. The site is an area surrounded by substantial topographical features which both eliminate visibility of the turbines from a large portion of the LVIA Study Area and provide a sense of scale that causes the turbines to appear congruous and appropriately scaled in the landscape type within which they are viewed. ➤ The existing turbines are evenly spaced, responding to the underlying pattern field pattern that aligns with the “Hilly and Flat Farmland type” in the 2006 WEDGs and the 2019 draft WEDGs. ➤ Due to the intervening localised topography in the landscape, the turbines appear set-back from this view.
Residual Effect (incl. mitigating factors)	<p>Slight (EPA, 2022)</p> <p>An effect which causes noticeable changes in the character of the environment without affecting its sensitivities</p>

Table 13-19 Viewpoint 3 Photographic Visualisation Assessment Table

Viewpoint 3 – Ballindaggan			
Viewpoint Description and Details	<ul style="list-style-type: none"> ➤ View from a local road between the L2007 and R745 in the townland of Ballindaggan. ➤ Approximately 2.5km southwest of the nearest existing turbine T7. ➤ Grid Reference: E 689204 N 647661 ➤ Number of turbines visible: 11/11 		
LCU and Sensitivity	LCU Upland – High	Visual Receptor(s) and Sensitivity	Motorists – Low Residents – High

Viewpoint 3 – Ballindaggan	
'Current View' Description	This image shows a medium range view across an undulating agricultural landscape comprising fields of grassland and arable crops delineated by mixed leaf treelines and shrubs. From this location the topography slopes gently down to the centre of the image before sloping back upwards to a hill where the existing turbines are located. Long range views are limited by the boundary vegetation and topography present throughout the view.
Proposed View with Cumulative Description	<p>The existing turbines are visible in the background of the view elevated on top of the hill. The majority of the turbines are fully visible. The existing Castledockrell turbine T12 is mostly screened by the topography with the blades just visible over the hill.</p> <p>Several of the existing Knockalour and Gibbet Hill turbines are visible in the left background of the view on top of elevated landforms.</p>
Cumulative Effects	The existing turbines are viewed as one coherent wind farm with the Proposed Development and the existing T12 turbine. From this view, the more distant Knockalour and Gibbet Hill turbines to the left of the image are perceived at a different scale and are visually separated from the existing turbines. Considering the distance between the Proposed Development and the existing Knockalour and Gibbet Hill turbines, no Significant cumulative visual effects are likely to occur.
Sensitivity of Visual Receptor(s) (Definition – from Section 1.5.3 of Methodology Appendix 13-1)	<p>Medium: Includes viewers who may have some susceptibility to a change in view. Viewers such as residents in medium proximity but who do not have views focused in the direction of the Proposed Development or whose views are not of a particularly scenic quality; those from views which are not designated but may have local recreational uses or those travelling along routes or at view which are considered moderately scenic.</p> <p>This is a low trafficked area however the local road does lead directly into the village of Ballindaggan, this viewpoint has been given a “Medium” sensitivity rating on account of its proximity to Ballindaggan.</p>
Magnitude of Change (Definition from Section 1.5.3 of Methodology Appendix 13-1)	Moderate: “The change in the view may involve partial obstruction of existing view or partial change in character and composition of the baseline through the introduction of new elements or removal of existing elements. Likely to occur at locations where the development is partially visible over a moderate or medium extent, and which are not in close proximity to the development. Change may be readily noticeable but not substantially different in scale and character from the surroundings and wider setting.”
Significance of Effect	Medium X Moderate = Moderate/Minor = Moderate (EPA, 2022) An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends
Mitigation Factors	<ul style="list-style-type: none"> ➤ This viewpoint is located in an area designated as a ‘Strategic Area’ for wind energy development in local planning policy. ➤ There is a limited number of residential properties along this road, ➤ The distance, scale and screening of the Knockalour and Gibbet Hill turbines ease the cumulative effects. ➤ The existing turbines do not obstruct or intrude upon views of any unique landscape features or views of unique aesthetic value.

Viewpoint 3 – Ballindaggan	
	<ul style="list-style-type: none"> ➤ The location of this viewpoint was carefully selected to ensure both turbine clusters are visible amongst the mature treelines in the view. Both turbine clusters are unlikely to be viewed together from most other locations in this area
Residual Effect (incl. mitigating factors)	<p>Moderate (EPA, 2022) An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends.</p>

Table 13-20 Viewpoint 4 Photographic Visualisation Assessment Table

Viewpoint 4 – Tomatee			
Viewpoint Description and Details	<ul style="list-style-type: none"> ➤ View from a local road in the townland of Tomatee. ➤ Approximately 330m North of the nearest existing Castledockrell turbine T10. ➤ Grid Reference: E 691117 N 649604 ➤ Number of turbines visible: 10/11 		
LCU and Sensitivity	LCU Upland – High	Visual Receptor(s) and Sensitivity	Motorists – Low Residents – High
'Current View' Description	<p>This image shows a short-range view from a local road in townland of Tomatee. There is a steep grassy field in the immediate foreground sloping up towards the existing turbines. Short hedgerows can be seen on the crest of the hill with mixed vegetation seen to the right of the image. All turbines of the Proposed Development are visible in this view. 7 no. of the turbines are mostly screened from view due to their location beyond the hill and behind existing vegetation.</p>		
Proposed View with Cumulative Description	<p>The Castledockrell turbines are visible throughout the view, some turbines are partially screened by the hill and vegetation. The hub and blades of the existing Castledockrell turbine T12 are visible to the left of the view.</p>		
Cumulative Effects	<p>No other existing, permitted or existing turbines are visible from this location. No cumulative effects will arise.</p>		
Sensitivity of Visual Receptor(s) (Definition – from Section 1.5.3 of Methodology Appendix 13-1)	<p>High: <i>“Includes viewers at designated views or landscapes. Viewers such as residents in close proximity to the viewpoint who have primary views that will be in the direction of the development that may not necessarily be of a particularly scenic quality; viewers at well-known heritage or popular tourist or recreational areas, viewers along scenic or tourist routes.”</i></p> <p>This viewpoint has been given a high sensitivity rating on account of its proximity to the Proposed Development site.</p>		
Magnitude of Change (Definition from Section 1.5.3 of Methodology Appendix 13-1)	<p>Substantial: <i>“Substantial change, where the proposals would result in large-scale, prominent or very prominent change, leading to substantial obstruction of existing view or complete change in character and composition of the baseline though removal of key elements or addition of uncharacteristic elements which may or may not be visually discordant. This includes viewpoints where the proposed development is fully or almost</i></p>		

Viewpoint 4 – Tomatee	
	<i>fully visible over a wide extent, at proximity to the viewer. This change could be long term or of a long duration.</i>
Significance of Effect	High x Substantial = Major/Moderate = Very Significant (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Mitigation Factors	<ul style="list-style-type: none"> ➤ The existing turbines are sited strategically within a large, upland landscape type capable of accommodating a wind energy development of this scale. The site is an area surrounded by substantial topographical features which both eliminate visibility of the turbines from a large portion of the LVIA Study Area and provide a sense of scale that causes the turbines to appear congruous and appropriately scaled in the landscape type within which they are viewed. ➤ The existing turbines are evenly spaced, responding to the underlying pattern field pattern that aligns with the with 2006 WEDGs and the 2019 draft WEDGs. ➤ Visibility appraisals determined that most of the occupied residential receptors will not have clear and open views in the direction of the Proposed Development. Primary visual amenity in this area is in the opposite direction, i.e. to the north/northwest towards the Blackstairs mountains
Residual Effect (incl. mitigating factors)	Significant (EPA, 2022) An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.

Table 13-21. Viewpoint 5 Photographic Visualisation Assessment Table

Viewpoint 5– Rossard R746 Regional Road			
Viewpoint Description and Details	<ul style="list-style-type: none"> ➤ View from R746 Regional Road in the townland of Rossard. ➤ Approximately 3.5km northwest of the nearest existing turbine T10 ➤ Grid Reference: E 688451 N 651482 ➤ Number of turbines visible: 11/11 		
LCU and Sensitivity	LCU –Upland – High	Visual Receptor(s) and Sensitivity	Motorists – Low Residents – Medium
'Current View' Description	<p>This image was captured along the regional road R746 in the townland of Rossard. The road is aligned with high-growing hedgerows. The view was captured from a gap in hedgerows created by a gate to a field. The view looks across fields of grassland which are uniformly transversed by shrubbery and trees. The undulating nature of the view can be seen in this view.</p> <p>The existing turbines are visible in the centre of the image, appearing neatly and linearly placed along the ridgeline of the rolling hills. To the extreme left of the image, two of the existing Ballaman turbines are visible.</p>		
Proposed View with Cumulative Description	All of the existing turbines are visible throughout the view, with the full extent of most turbines visible.		

Viewpoint 5– Rossard R746 Regional Road	
	In the 90-degree image there are 2 Ballaman turbines visible, which are approximately 7km away from the closest Castledockrell turbine, T11.
Cumulative Effects	The existing turbines appear neatly along the ridgeline of the undulating landscape. The distant turbines of Ballaman are perceived at a different scale and are visually separated from the Proposed Development. However, due to the scale and distance of these two turbines cumulative effects are low.
Sensitivity of Visual Receptor(s) (Definition – from Section 1.5.3 of Methodology Appendix 13-1)	Low: <i>“Includes viewers engaged in activities where the focus is not on the landscape or view. These include those travelling along a busy route, viewers at work or engaged in sport not related to views or experience of the landscape.”</i> This is a sparsely settled landscape and a regional road with high hedgerows. On balance, this viewpoint is deemed to be of Low sensitivity.
Magnitude of Change (Definition from Section 1.5.3 of Methodology Appendix 13-1)	Moderate: <i>“The change in the view may involve partial obstruction of existing view or partial change in character and composition of the baseline through the introduction of new elements or removal of existing elements. Likely to occur at locations where the development is partially visible over a moderate or medium extent, and which are not in close proximity to the development. Change may be readily noticeable but not substantially different in scale and character from the surroundings and wider setting.”</i>
Significance of Effect	Low x Moderate = Minor = Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Mitigation Factors	<ul style="list-style-type: none"> ➤ The existing turbines present as one coherent wind farm development and are evenly spaced on the hill, responding to the underlying pattern field pattern that aligns with the with 2006 WEDGs and the 2019 draft WEDGs. ➤ Large hedgerows screen the turbines for large sections of the regional road. The direction of travel is also perpendicular to the turbines. ➤ There is a limited number of residential properties along this road, with views mainly focused on the Blackstairs mountains to the northwest of the regional road.
Residual Effect (incl. mitigating factors)	Slight (EPA, 2022) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities

The significance of the residual visual effect was not considered to be “Profound” or “Very Significant” at any of the 5 viewpoint locations. A residual visual effect of ‘Significant’ was deemed to arise at one of the viewpoint locations. In this case a residual visual effect of ‘Significant’ is due to the proximity of the visual receptor (<500m from the proposed turbine). A residual effect of ‘Moderate’ was deemed to arise at one of the five viewpoints. All other viewpoints were assessed as resulting in “Slight” residual visual effects.

13.7.3.3 Summary of Visibility Appraisal

In summary, the turbines are largely screened from view due to vegetation and topography surrounding the site. When they are visible, they appear neatly and orderly along the ridgeline. Views of the Proposed Development site are screened from the west due to the Blackstairs mountains, and the Sliabh Bhui mountains in the east, which reduces the geographical extent of visibility and visual exposure of the existing turbines. Views of the existing turbines is intermittent as a result of the undulating terrain and vegetation in the landscape. As discussed in relation to Oulart Hill and Vinegar Hill, beyond 5km of the site the existing turbines occupy a limited horizontal and vertical extent within views.

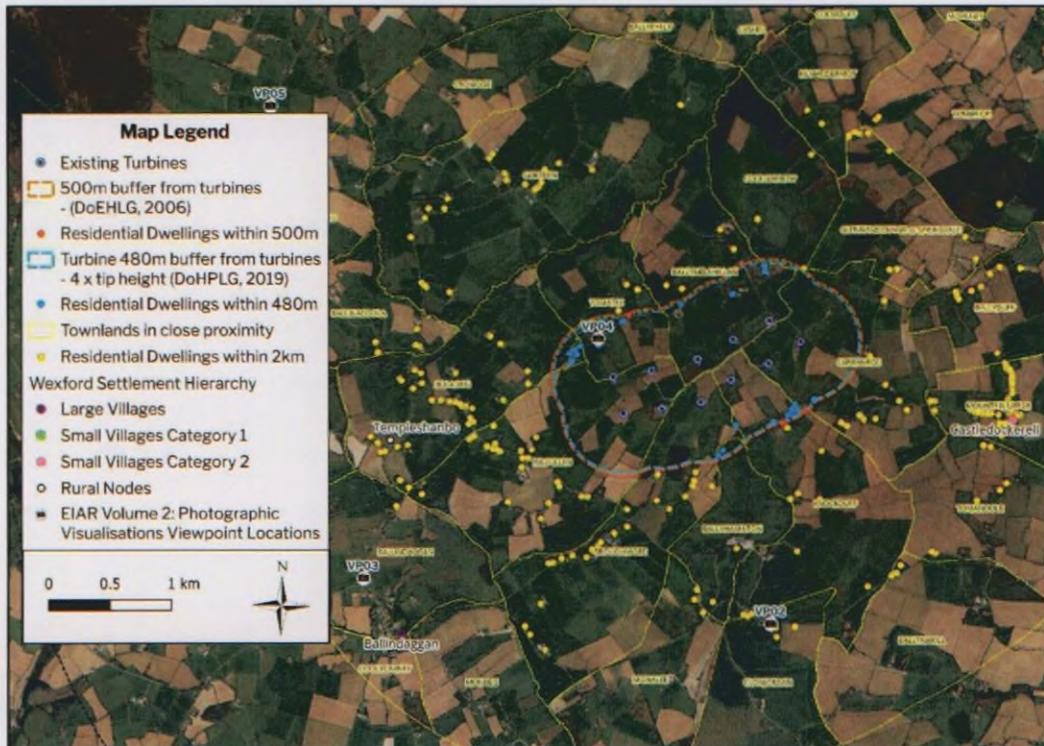


Figure 13-18 Residential Visual Amenity

Residential Visual Amenity

As noted above in Section 13.5.2 and seen in Figure 13-18 the area surrounding the site is sparsely settled, however there are 26 houses within 500m of the turbines and 22 dwellings within 480m (4x tip height). A number of these residential dwellings have been built since the existing Castledockrell Wind Farm originally received planning permission in 2005. The majority of these residents have views outwards across the valley and not towards site.

From the above discussion, it is likely that the highest effects on residential visual amenity will occur in relation to a relatively small number of receptors located within 500m of the existing turbines, with the scale of turbines in view reducing quickly from locations further from the site. Beyond this distance the scale of the turbines reduces substantially.

All 5 no. photographic visualisations were captured within 5km of the site. As detailed throughout this chapter, the existing turbines are only likely to be visible from locations within 5km of the site, beyond 5km visibility will be less due to topography and vegetation screening. In the wider LVIA Study Area views of the existing turbines will be limited to areas of high elevation.

Photographic Visualisations are just one of the tools employed during the LVIA that was conducted in order to inform the assessment of landscape and visual effects. It would be a disproportionate measure to include an individual photographic visualisation from every residential dwelling and this is not required to conduct a thorough and robust assessment of landscape and visual effects. In line with the guidance laid out in the GLVIA (2013), the viewpoints selected for the LVIA conducted were informed by a range of factors including the “ZTV analysis, by fieldwork, and by desk research” (para 6.18, GLVIA 2013). Furthermore, the GLVIA (2013) states that representative viewpoints are “selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ” (para 6.19 GLVIA, 2013). It is submitted that the viewpoints used in the conduct of the LVIA particularly in close proximity to the existing turbines are sufficient to represent the residential receptors within the LVIA study area, including the “distribution of population” (para 6.18, GLVIA 2013).

The population of the two Electoral Divisions (ED)s within and surrounding the Proposed Development site is detailed in Chapter 5 – Population and Human Health. As shown in Table 5-2 in Chapter 5 – Population and Human Health of this EIAR, the population density of EDs, recorded during the 2022 Census was 32.1 persons per km². This figure is significantly lower than the national population density of 73.27 persons per km² and the Wexford County population density of 69.25 persons per km². These findings indicate that the landscape surrounding the Proposed Development site has a relatively low population density.

The highest effect on residential visual amenity occurs in relation to a relatively small number of receptors located within 500m of the existing turbines. VP04 was captured within 500m of the existing turbines in close proximity to several residential dwellings. This viewpoint was given a ‘high’ sensitivity on account of the residents in close proximity to the site. The magnitude of change was deemed to be ‘Substantial’ due to the horizontal and vertical extent at which the existing turbines are viewed. These residential dwellings do not have a view of particularly scenic quality in the direction of the site and the majority of the turbines are partially or completely screened from view. Overall, this viewpoint was given a ‘Significant’ effect. This would be the case for the majority of residential dwellings within 480m (4 x tip height) of the site. Plate 13-24 below shows a view from a cluster of residential dwellings located approximately 950m south of T7. From this distance the vertical extent of turbines in view reduces and no significant visual effects are likely to occur.



Plate 13-24 View from residential dwellings approximately 950m from the Site

13.7.3.3.2 Cumulative Visual Effects

The cumulative visual effects reported in this section have been informed by observations made during site visits, as well as assessment of the photographic and wireline visualisations included in the Volume

2 Photographic Visualisation Booklet. The viewpoint assessment tables include a cumulative visual assessment for each viewpoint. No significant cumulative visual effects were deemed to arise at any of the 5 viewpoints.

There are 12 no. of existing, permitted and proposed wind farm developments within the LVIA Study Area. Site visits determined that there will be limited visual cumulative effects. In most instances the existing T12 turbine of the Castledockrell Wind Farm will be visible along with the Proposed Development, together they appear as one coherent wind farm development. No significant effects are deemed to arise as a result of the Proposed Development and this turbine as they appear as one coherent wind farm in the landscape.

13.7.4 Decommissioning Phase

Decommissioning of the existing wind farm is required to be carried out in August 2025, i.e. 20 years from the date of commissioning of the wind farm, under the current planning permission. The Proposed Development would extend the operation of the existing wind farm for a further 20 years, thereby postponing decommissioning until 2045.

Condition 8 of the current Planning Permission states:

'Upon termination of use of the wind farm, the mast and turbines shall be dismantled and removed from the site and the site shall be restored to its existing condition in consultation with the planning authority. Prior to the commencement of development, the developer shall lodge with the County Council a cash deposit, a bond of insurance company, or other security to secure the satisfactory reinstatement of the site on the cessation of the project. The form and amount of the security shall be agreed between the Council and the developer or, in default of agreement, shall be determined by An Bord Pleanála.'

It is considered that this condition is not appropriate, as much of the wind farm access road network is being utilised by local landowners to access their lands. All above-ground turbine components will be removed in compliance with the above conditions and sent for recycling/reuse. However, their foundations will be left in situ as this is considered the more environmentally prudent option, as to remove that volume of reinforced concrete from the ground could result in significant environmental nuisances as noise, dust and/or vibration.

It is proposed that the site roadways be left in situ, as appropriate, so as to facilitate on-going access to local landowners. If it were to be confirmed that the roads were not required in the future for any other useful purpose, they could be covered over with local topsoil and left to reseed, however, that is not envisaged at this time. It is proposed to leave underground cables in place where they are below a level likely to be impacted by typical agricultural works.

As noted in the Scottish Natural Heritage (SNH) report *Research and Guidance on Restoration and Decommissioning of Onshore Wind Farms* (SNH, 2013) reinstatement proposals for a wind farm are typically made far in advance, so within the proposed 10-year extension of operation of the site, technological advances and preferred approaches to reinstatement are likely to change. According to the SNH guidance, it is therefore *"best practice not to limit options too far in advance of actual decommissioning but to maintain informed flexibility until close to the end-of-life of the wind farm"*.

The final Decommissioning Plan will therefore be agreed with the Local Authority at least three months prior to decommissioning of the Proposed Development.

Conclusion

It is important to re-iterate that the Castledockrell Wind Farm is an existing facility and this EIAR is being prepared in support of a planning application to extend the operational lifespan of the wind farm beyond 2025, by a further 20 years.

This Chapter assesses the likely significant landscape and visual impacts arising as a result of extending the operational lifespan of the existing turbines. Although all elements of the Proposed Development are assessed, the Chapter focusses upon the turbines, as they are deemed to be the essential aspects of the proposal under assessment from a landscape and visual perspective (see Section 13.2.1 above). The Chapter describes the baseline landscape and assesses the direct effects on the landscape of the site, as well as effects on landscape character and the impact on sensitive landscape receptors and Landscape Character Units (LCUs). Visibility of the existing turbines was assessed from receptors within a Study Area extending 20km from the existing turbines; and visual effects were determined from information gathered during multiple site visits as well as other tools such as ZTV mapping and photographic visualisations.

The site is in an undulating landscape comprising of existing wind farm infrastructure and agricultural land. The existing turbines are strategically sited between areas of high elevation limiting visual exposure in the wider LVIA Study Area. On-site visibility appraisals, ZTV mapping, and visual assessment from viewpoint locations determined that visibility of the existing turbines is very limited from locations beyond 5km from the site. Siting of the existing turbines in an undulating landscape with highly vegetated working fields surrounding the site, largely restricts visual exposure in the wider landscape. Visibility of the existing turbines beyond the immediate landscape setting of the Proposed Development site is limited to localised areas of high elevation where open views across the undulating and highly vegetated landscape are available from elevated vantage points, which is in general not a common occurrence in the LVIA Study Area. When the existing turbines are visible from elevated vantage points beyond 5km, they occupy a limited horizontal and vertical extent within views.

The continued operation of existing turbines on the site will not alter the landscape of the site itself. In terms of effects on Landscape Character, the sensitivity of this landscape, Uplands LCU, to this form of development was deemed to be High. The continued presence of turbines and other infrastructure will cause a 'Moderate' magnitude of change to result in a 'Moderate' residual effect on the LCU. All other LCUs within the LVIA Study Area were comprehensively assessed in Section 13.5. Effects on landscape character from these LCUs relate to impacts on perceptual and aesthetic qualities. The continued presence of turbines will not materially alter these landscape receptors and likely effects upon landscape character were not deemed to be significant.

Photographic visualisations were used to assess the visual effects arising as a result of the Proposed Development from 5 No. viewpoint locations. The significance of the residual visual effect was not considered to be "Profound" or "Very Significant" at any of the 5 viewpoint locations. A residual visual effect of 'Significant' was deemed to arise at one of the viewpoint locations (VP04). In this case a residual visual effect of 'Significant' is due to the proximity of the visual receptor (<300m from the proposed turbine). A residual effect of 'Moderate' was deemed to arise at one of the five viewpoints. All other viewpoints were assessed as resulting in "Slight" residual visual effects.

The assessments determined that no significant cumulative landscape and visual effects will occur as a result of the continued operation of the Castledockrell turbines in combination with any other existing, permitted or proposed wind farm developments in the LVIA Study Area. As reported throughout this chapter the Castledockrell turbines have a low overall visual exposure in the LVIA Study Area and do not cause significant visual impacts on any sensitive visual receptors.

As shown throughout the Photographic Visualisations Booklet and Visual Baseline Section the Proposed Development is seen as a spatially coherent wind farm and are viewed in a linear array across the undulating landscape. The existing turbines are suitably sited and scaled within the landscape.



Considering the limited visual exposure of the existing turbines and relatively limited number of sensitive landscape and visual receptors impacted within the LVIA Study Area, the Proposed Development is deemed to be acceptable from a landscape and visual perspective.

14. MATERIAL ASSETS

14.1 Introduction

Material Assets are defined in the *Advice Notes for Preparing Environmental Impact Statements* (EPA, Draft, 2015) as ‘resources that are valued and that are intrinsic to certain places’ and in the *Guidelines of the Information to be Contained within Environmental Impact Assessment Reports* (EPA, 2022) as ‘built services and infrastructure. Traffic is included because in effect traffic consumes roads infrastructure.’ Material Assets may be either of human or natural origin. The cultural assets of Archaeology and Cultural Heritage are addressed in Chapter 12 of this Environmental Impact Assessment Report (EIAR). Economic assets of natural heritage include non-renewable resources such as minerals and soils, and renewable resources such as wind and water. These assets are addressed in Chapter 8: Land, Soils and Geology, Chapter 9: Water, and Chapter 10: Air and Climate. Tourism and amenity resources, which are also considered material assets, are addressed in Chapter 5: Population and Human Health.

This chapter of the EIAR addresses the likely significant effects of the Proposed Development on transportation infrastructure (Section 14.2) and on telecommunications and aviation (Section 14.3), which are economic assets of human origin. This chapter of the EIAR has been prepared in accordance with the requirements of the EIA legislation and guidance outlined in Chapter 1: Introduction.

14.1.1 Statement of Authority

This section of the EIAR has been prepared by Brandon Taylor, and reviewed by Ellen Costello and Sean Creedon, all of MKO. Brandon Taylor is an Environmental Scientist with MKO with over one year of private consultancy experience. Brandon holds a BSc (Hons) in Geography from McGill University, and a MSc (Hons) in Coastal & Marine Environments from the University of Galway. Since joining the company, Brandon has been involved in the feasibility studies and EIAR production of multiple large-scale onshore wind energy developments, as well as additional reports including EIA screenings and construction and environmental management plans. Ellen Costello is a Senior Environmental Scientist with MKO with over five years of experience in private consultancy. Ellen holds a BSc (Hons) in Earth Science, and a MSc (Hons) in Climate Change: Integrated Environmental and Social Science Aspects where she focused her studies on renewable energy development in Europe and its implications on environment and society. Ellen’s key strengths and expertise are Environmental Protection and Management, Environmental Impact Statements, Project Management, and GIS Mapping and Modelling. Since joining MKO, Ellen has been involved in a range of renewable energy infrastructure projects. In her role as a project manager, Ellen works with and co-ordinates large multidisciplinary teams including members from MKO’s Environmental, Planning, Ecological and Ornithological departments as well as sub-contractors from various fields in the preparation and production of EIARs. Sean is an Associate Director in the Environment Team at MKO. He oversees a team of highly skilled environmental professionals working on EIAR for large-and medium scale Renewable Energy infrastructure. Sean has directed and overseen multiple renewable energy projects across wind, solar, battery and hydrogen as well as a range of thermal and other energy related developments. He has worked on the planning and environmental impact elements within all stages of wind farm project delivery. He is a member of the MKO senior management team responsible for developing the business, mentoring team members, fostering a positive culture and promoting continuous employee professional development. Sean has over 22 years’ experience in program and project development, holds an MSc from NUI Galway and a Diploma in Project Management from Institute of Project Management Ireland.

14.1.2 Guidance and Legislation

This section of the EIAR has been completed in accordance with the guidance set out in Chapter 1: Introduction. The assessment uses standard terminology to describe the likely significant effects associated with the Proposed Development. Further information on the classification of effects used in this assessment is presented in Section 1.7.2 in Chapter 1.

14.1.3 Scoping and Consultation

The scope for this assessment has been informed by consultation with statutory consultees, bodies with environmental responsibility and other interested parties as summarised in Section 2.7.2 of Chapter 2 of the EIAR. The relevant consultee responses are detailed below. Telecoms operators were contacted during April 2022, with all other bodies receiving the scoping consultation request in August 2023, with a further update being issued in November 2023. Copies of all scoping responses are presented in Appendix 2-1 of this EIAR.

Transport Infrastructure Ireland

At the time of preparing this report, Transport Infrastructure Ireland (TII) had not responded to the scoping consultation issued either in August or November of 2023.

Broadcasting Authority of Ireland

The Broadcasting Authority of Ireland responded to the telecoms scoping request on the 5th April 2022 to state that, while the BAI do not perform an in-depth analysis of wind turbines on FM networks, the Proposed Development is not located close to any proposed or planned FM transmission sites.

Commission for the Regulation of Utilities

At the time of preparing this report the Commission for the Regulation of Utilities (CRU) had not responded to the scoping requests issued in August and November of 2023.

EirGrid

At the time of preparing this report EirGrid had not responded to the scoping requests issued in August and November of 2023.

ESB

Electrical Supply Board (ESB) responded to the telecoms scoping request on the 24th June 2022 to confirm that there is no expected impact to any ESB networks.

Irish Aviation Authority

An email response was received from the Irish Aviation Authority on the 29th August 2023 stating that their Aerodromes Division do not require any measures to be incorporated within the Proposed Development, or presented within the EIAR.

14.3 Traffic and Transport

The purpose of this section is to assess the effects on roads and traffic of the Proposed Development.

For the development of new wind farms, the construction phase is the critical period with respect to the traffic effects experienced on the surrounding road network, in terms of both the additional traffic volumes that will be generated on the road network, and the geometric requirements of the abnormally large loads associated with the wind turbine plant.

However, since the Proposed Development does not involve any construction work, any potential traffic and transport impacts are limited to the operational and decommissioning phases of the project.

14.3.1 Guidance on Assessment of Effects

This section of the EIAR has been completed in accordance with the EIA Guidance set out in Chapter 1: Introduction. The assessment uses standard terminology to describe the likely significant effects associated with the Proposed Development. Further information on the classification of effects used in this assessment is presented in Section 1.7.2 of this EIAR.

14.3.2 Receiving Environment

14.3.2.1 Site Location

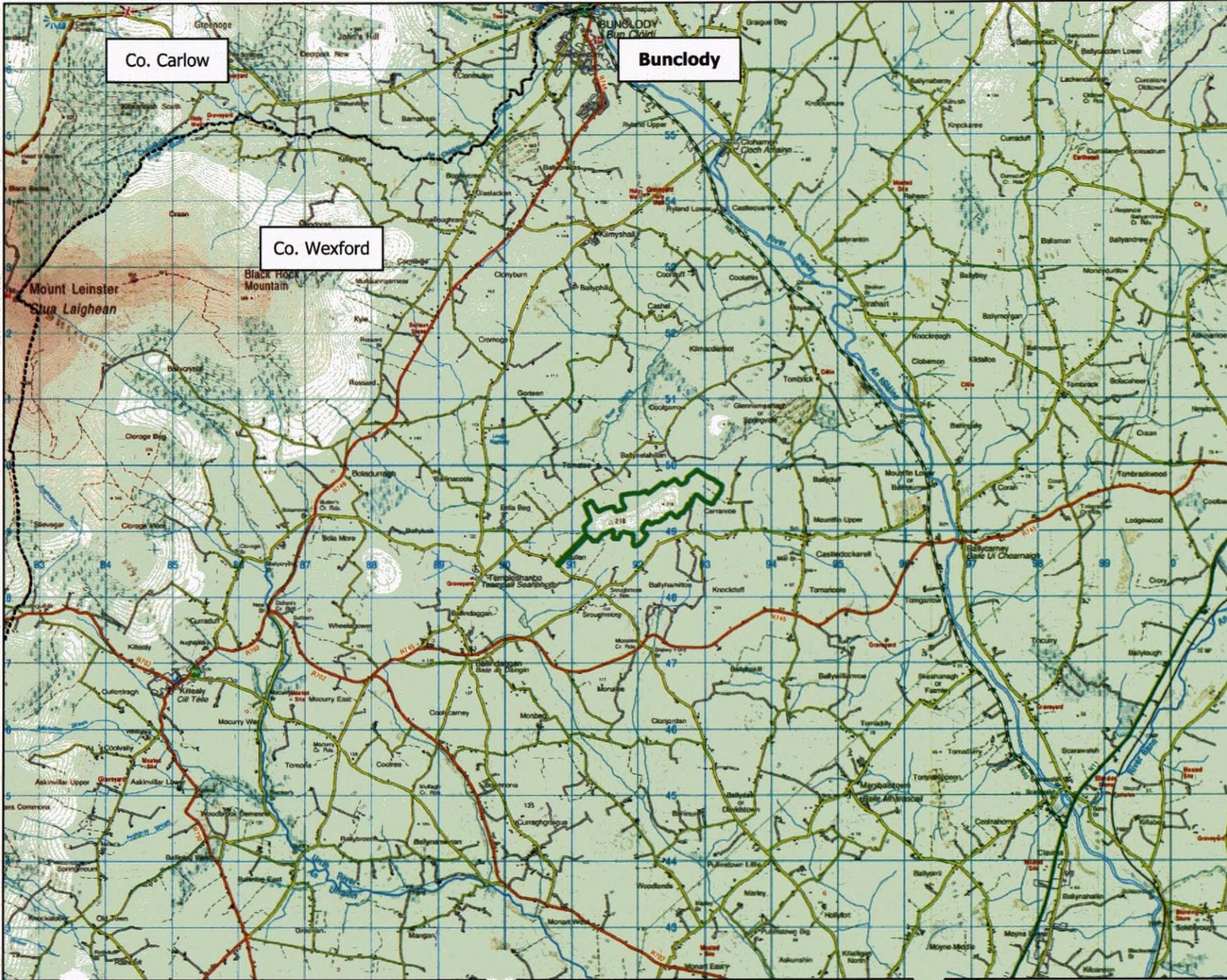
The existing Castledockrell Wind Farm is located 8.1km west of Ferns and 6.5km south of Bunclody, Co. Wexford, in the townlands of Kilcullen, Ballynelahillan, Carranroe, Tomatee, Knockduff and Sroughmore. The existing Castledockrell Wind Farm is based within agricultural lands, which is split between pastoral land and arable land. The approximate grid reference location for the centre of the site is ITM E 516272, N 670500. A site location map is provided in Figure 14-1.

14.3.2.2 Site Access and Current Traffic Requirements

Access to the existing Castledockrell Wind Farm for traffic, such as maintenance vehicles, is via the existing entrance on the L2012 Local Road, which runs in a north-south direction to the west-southwestern border of the Proposed Development site. The turbines are accessed via the existing onsite network of access roads.

As the Castledockrell Wind Farm is currently operational, and no changes to the existing wind farm are proposed, there is no construction phase associated with the proposed lifetime extension of the existing wind farm. There will therefore be no new construction traffic generated by the Proposed Development.

During the operational phase, the wind farm will continue to be remotely monitored. Traffic associated with the operational phase of the wind farm will be from Castledockrell Wind Group Ltd. personnel visiting the onsite substation and control building, and maintenance personnel who will visit individual turbines and associated infrastructure. The traffic volumes that will be generated by the Proposed Development during its continued operation will be minimal. The site will generate monthly maintenance trips, with approximately two maintenance staff travelling to site at any one time. The impact on the network of these trips during the operational stage is discussed in Section 14.2.3 below.



Co. Carlow

Bunclody

Co. Wexford

Map Legend

-  EIAR Site Boundary
-  County Boundaries



Drawing Title
Site Location

Project Title
Castledockrell Wind Farm Extension of Operational Life

Drawn By: **KB** Checked By: **BT**

Project No.: **210847** Drawing No.: **Figure 14-1**

Scale: **1:75,000** Date: **2025-02-25**

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14.3.3 Likely and Significant Effects and Associated Mitigation Measures

14.3.3.1 'Do-Nothing' Scenario

Under the Do-Nothing scenario, the Proposed Development would be decommissioned in accordance with the conditions of the current planning permission (WCC Pl. Ref. 2004/4702, ABP Ref PL26.211725), once this permission expires in 2025. Should the Decommissioning Plan as set out in the current conditions be implemented it may lead to effects on traffic and transport due to the movement of vehicles and machinery required to remove the existing turbines and other infrastructure.

A Decommissioning Plan will be agreed with the local authority at least 3 months prior to the start of decommissioning works which would include mitigation measures to reduce any potential negative impacts on the environment. However, a preliminary decommissioning plan has been prepared and is included in Appendix 44 of this EIAR.

The effect of decommissioning is considered **neutral** in the context of the EIAR.

14.3.3.2 Construction Phase

As has been detailed in Chapter 1 and Chapter 4 of this EIAR, no construction or groundworks are required as part of this Proposed Development, as the proposal seeks to extend the operational life of the wind farm and associated onsite infrastructure. Therefore, there is no potential for construction phase related impacts on traffic or transport.

14.3.3.3 Operational Phase

During the operational phase of the Proposed Development, the majority of maintenance works on the site will be completed by a two-person team travelling in a light goods vehicle. Maintenance crews will be required onsite to complete major component replacement on a sporadic basis, e.g. turbine component changes or onsite control building maintenance.

Typically, there are no more than two trips per day to the site made by car or light goods vehicle. The direct effect on the surrounding road network will be imperceptible neutral and long-term given the very low volume of daily trips to the site.

Mitigation Measures

Due to very low volumes of traffic forecast to be generated during this stage no mitigation measures are required.

Residual Effect

The continued operation of the Proposed Development will have **Long-term, Imperceptible, Neutral Effects** on traffic and transportation during the operational phase of the Proposed Development, as no changes to the existing wind farm are proposed.

Significance of the Effects

Based on the assessment above there will be **No Significant Direct or Indirect Effects** on traffic and transport as a result of the operational phase of the Proposed Development.

14.3.3.4 Decommissioning Phase

It is proposed to extend the lifetime of the existing wind farm by 20 years, thereby amending the required decommissioning date from 2025 to 2045. The potential impacts associated with future decommissioning of the Proposed Development at that time will be similar to those associated with a typical wind farm construction but of a reduced magnitude, due to the reduced scale of the proposed decommissioning works, as outlined in Chapter 4, Section 4.6 of this report. A Decommissioning Plan is also presented in Appendix 4-4 of this EIAR.

If the Proposed Development is decommissioned as proposed in 2045, cranes and heavy plant will be required onsite to disassemble the existing above-ground turbine structures. Turbine infrastructure including turbine towers, nacelles and rotor components will be separated and removed offsite for re-use or recycling. The Applicant has made a commitment to recycle as many components as possible, including the utilisation of both currently tested recycling methods and future options that may be available by 2045.

When the wind farm is decommissioned following the proposed extension of operation, it is proposed that the turbine foundations and hardstanding areas will be left in place and allowed to naturally revegetate and regenerate. Leaving the turbine foundations in-situ is considered a more environmentally prudent option, as to remove that volume of reinforced concrete from the ground could result in significant environmental nuisance such as noise, dust and/or vibration. It is proposed to leave access roads in-situ, as these are in use by local landowners to access their lands. While the actual number of loads that will be required to be removed from the wind farm in the event that the Proposed Development is decommissioned has not been determined at this stage, the impact in terms of traffic volumes will be significantly less than during the original construction stage.

Project Trip Generation – During Decommissioning

Tables 14-1 and below outlines an estimate of trip generations for the decommissioning of the Proposed Development, including delivery of crane, plant, refuelling and delivery of soil. Table 14-2 then estimates the trip generations for the removal of the 11 no. turbines following decommissioning from site. For the purpose of this assessment, it is assumed that this is a theoretically precautionary scenario, where there is no potential for turbine blades to be cut onsite and assumes that Delivery of Soil for backfilling is opted rather than sourcing soil onsite.

Traffic volumes are discussed in terms of Passenger Car equivalent Units (PCUs), where each vehicle is expressed in terms of its demand on the network relative to the equivalent number of cars. For example, a large articulated (Artic) HGV was given a factor of 2.3 passenger car units (as per TII Project Appraisal Guidelines for National Roads Unit 5.2), while one of the extended HGVs transporting the large turbine components was assigned a value of 10.

Table 14-1 Estimated trip generation for decommissioning phase

Material	Total Truck Loads	Truck type	PCU Value	Total PCUs
Delivery of plant	5	Large Artic	2.3	11.5
Cranes for turbines	1	Large Artic	2.3	2.3
Additional Crane Materials	3	Large Artic	2.3	2.3
Refuelling for plant	5	Large Artic	2.3	11.5
Removal of plant	5	Large Artic	2.3	6.9

Delivery of Soil*	11	Large Artic	2.3	13.8
Total Truck Loads	30			
*For this table, a theoretically precautionary scenario is assumed. Therefore, delivery of soil is opted for rather than sourcing soil onsite.				

Table 14-2 Estimated trip generation for the removal of 11 no. turbines following decommissioning of the wind farm

Material	Units	Quantity per Unit	Total Quantity	Quantity per Truck	Total Truck Loads	Truck type
Nacelle	11	1	11	3	4	Extended Artic
Blades	11	3	33	3	11	Extended Artic
Towers	11	4	44	4	11	Extended Artic
Transformer	11	1	11	3	4	Large Artic
Drive train and blade hub	11	1	11	3	4	Large Artic
Total					34	

An estimated theoretically precautionary of 64 truckloads is the required trip generation in the decommissioning phase. The decommissioning phase will take approximately 3-6 months to complete from commencing the removal of turbines to the final reinstatement of the site. At this time, it is not possible to determine exactly when decommissioning will take place.

Mitigation Measures

As noted in the Scottish Natural Heritage (SNH) report *Research and Guidance on Restoration and Decommissioning of Onshore Wind Farms* (SNH, 2013) reinstatement proposals for a wind farm are typically made far in advance, so within the proposed 20-year extension of operation of the site, technological advances and preferred approaches to reinstatement are likely to change. According to the SNH guidance, it is therefore *“best practice not to limit options too far in advance of actual decommissioning but to maintain informed flexibility until close to the end-of-life of the wind farm”*.

When the Proposed Development is decommissioned after the 20 years extension of life, an updated Decommissioning Plan, including material recycling / disposal and a Traffic Management Plan, developed to minimise impacts to the local road network, will be prepared at the time for agreement with the Local Authority. Turbine components will be transported from the Site on specified routes only, as agreed with the Local Authority prior to decommissioning.

Residual Effect

As stated above, in the event that the Proposed Development is decommissioned in 2045, an updated Decommissioning Plan will be prepared and implemented in order to minimise the residual impacts. The decommissioning phase of the Proposed Development will likely result in a residual impact to other road users that is a **Temporary, Slight, Negative Effect**.