



APPENDIX 13-2

Cleanrath 191223-a:

Landscape Character Assessment

1.

LANDSCAPE CHARACTER ASSESSMENT TABLES

LCT 12 (a) - Rolling Marginal Middleground	
Distance from site to Nearest/Furthest Area of LCT	5 of the 9 Cleanrath wind farm development turbines are located within this LCT. At its furthest point from the Cleanrath wind farm development, the LCT extends 10.1 km north from the nearest turbine.
LCA Key Characteristics	<ul style="list-style-type: none"> Comprises rolling topography with rugged rocky ridges and Sullane River Basin. Hills forming these two basins are gently sloping, becoming somewhat steeper at lower levels and generally comprised of patchy moorland vegetation of semi-natural grassland and heather. A mixture of small irregularly shaped fertile fields located on lower ground between scrub and rocky outcrops. The landscape is mottled in terms of both colour and texture due to diverse landcover, involving a mix of scrub and cultivated patches. On wetter ground and along streams at lower altitudes willow is more prevalent and rush is common in fields of marginal agricultural quality. Broad swathes of coniferous plantations skirt the hills mostly at lower altitudes but also on some hilltops. Extensive felling has taken place. Significant areas of broadleaf woodland including St. Gobanits Wood which is an important old Oak woodland, a habitat listed on Annex 1 of the EU Habitats Directive. Field Boundaries consist of hedgerows, post and wire fencing and some stone walls.
Landscape Designations	<ul style="list-style-type: none"> Not a <i>County Cork High Value Landscape</i> in Appendix E of the CCDP.
Landscape Sensitivity to Wind Farm Development	The 2007 Cork County Draft Landscape Strategy states that ' <i>windfarms can be seen off in the distance from certain elevated views within this landscape type. While their presence is noted, their visual impact is not major but an accumulation of more windfarms could have a more intolerable visual impact in the future</i> '. The CCDP does not classify the landscape as being 'high Value Landscape'. Therefore, a Moderate landscape sensitivity to wind farm development is assigned for this LCT
Visibility of the Cleanrath wind farm development within the LCT	<p>As five of the Cleanrath wind farm development turbines are located in this LCT they will be clearly visible in the immediate area. The ZTV mapping indicates that there is full theoretical visibility of the Cleanrath wind farm development in the southern region of the LCT within an approximately 3.5km vicinity of the Cleanrath wind farm development. Topographical landform screens most visibility from the central and northern locations of the LCT. Patches of full theoretical visibility are evident in the north of the LCT, these areas are restricted to higher elevations on the southern slopes of the Derrynasaggart Mountains.</p> <p>In reality the actual visibility of the 9 turbines is much less and much more intermittent than indicated by the ZTV.</p>
Cumulative Baseline	<p>There are currently no other operational or permitted wind farms within this LCT. Therefore, the Cumulative Landscape Status is:</p> <p>1. Landscape character area with no wind turbines</p>

LCT 12 (a) - Rolling Marginal Middleground	
Cumulative Landscape Effects	The Cleanrath wind farm development changes the cumulative status to: No.2. "Landscape character area with occasional wind turbines in it and/or intervisible in another landscape character area/s". Therefore, cumulative landscape effects are considered Moderate .
Magnitude of Change	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.
Significance of Effect	Moderate x Moderate = Moderate/Minor = Moderate (EPA, 2017) An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends.
Mitigation Factors	➤ Areas of the LCT in close proximity to the Cleanrath wind farm development receive these landscape effects. However, in northern areas of the LCT visibility of the Cleanrath wind farm development is greatly mitigated by topography.

LCT 15 (a) - Ridged and Peaked Upland	
Distance from site to Nearest/Furthest Area of LCT	4 of the 9 Cleanrath wind farm development turbines are located within this LCT. At its furthest point from the Cleanrath wind farm development, the LCT extends 10.1 km north from the nearest turbine.
LCA Key Characteristics	<ul style="list-style-type: none"> ➤ A rolling mountainous topography at relatively high elevations which includes the Shehy Mountains. ➤ Soil is of low fertility and experiences relatively high levels of rainfall due to its elevation, resulting in poor growing conditions and limited vegetation including moorland, heath and scrub. ➤ Isolated or clusters of fields are scattered along lower slopes giving this landscape type a small scale dimension to the otherwise open moorland. ➤ Large tracks of coniferous forestry evident particularly in upland areas. ➤ Patches of fertile land within the landscape. ➤ Field boundaries are mainly stone walls and lowland hedges.
Landscape Designations	➤ Not a <i>County Cork High Value Landscape</i> in Appendix E of the CCDP.
Additional Landscape Recommendations	The Draft Landscape Strategy recommends that the value of the Cousane Gap and Lough Allua be recognized as a valuable amenity for tourism and recreation, and that the upland areas (Shehy Mountains) are recognized in particular as a tourism resource for hill walking.
Landscape Sensitivity to Wind Farm Development	<p>The 2007 Cork County Draft Landscape Strategy states that <i>“This area is not regarded as a “Strategic Search Area” or a “Strategically Unsuitable Area” for windfarm developments. The low rolling topography of this landscape would not lend itself to windfarm development and such developments would dominate the surrounding landscape. There are views of wind farms to the west from this landscape type on the Kerry side of the Cork Kerry boundary’.</i></p> <p>In consideration of this description and wind energy designations, a Moderate landscape sensitivity to wind farm development is assigned for this LCT.</p>
Visibility of the Cleanrath wind farm development within the LCT	<p>As four of the Cleanrath wind farm development turbines are located in this LCT they will be clearly visible in the immediate area. The ZTV mapping indicates that there are large intermittent patches of full theoretical visibility in the north-western region of the LCT, these patches extend approximately 10km south and south-west of the Cleanrath wind farm development. All areas in the LCT greater than 10 km from the Cleanrath wind farm development are significantly screened by the Shehy mountain Range.</p> <p>In reality the actual visibility of the 9 turbines is much less and much more intermittent than indicated by the ZTV.</p>
Cumulative Baseline	<p>The Derragh wind farm comprises of six turbines and is located approximately 2.5 km west of the Cleanrath wind farm development. The Shehy More wind farm is located approximately 6.5 km south-south-west of the Cleanrath wind farm development. Therefore, the Cumulative Landscape Status is:</p> <p>2. Landscape character area with occasional wind turbines in it and/or intervisible in another landscape character area/s.</p>
Cumulative Landscape Effects	The Cleanrath wind farm development slightly alters the status identified above. Therefore, cumulative landscape effects are considered Moderate .

LCT 15 (a) - Ridged and Peaked Upland	
Magnitude of Change	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.
Significance of Effect	Moderate x Moderate = Moderate/Minor = Moderate (EPA, 2017) 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"> ➤ Areas of the LCT in close proximity to the Cleanrath wind farm development are subjected to these landscape effects. However, in southern areas of the LCT visibility of the Cleanrath wind farm development is greatly mitigated by topography. ➤ Cumulative effects are mitigated by strategic siting and design of the Cleanrath wind farm development

LCT 8 - Hilly River and Reservoir Valley	
Distance from site to Nearest/Furthest Area of LCT	This LCT is approximately 7.6 kilometres east of the nearest turbine at its closest point, and 35.8 kilometres at its furthest.
LCA Key Characteristics	<ul style="list-style-type: none"> ➤ Landcover pattern comprises regular shaped fields of medium size, bounded by broadleaf hedgerows which are mostly low and thin. The hillsides are dominated by scrub, marginal land, bracken and gorse. ➤ Given that the soils are generally of moderate fertility, landuse comprises mostly pasture. ➤ The Gearagh is protected for its wildlife value and supports the most extensive alluvial woodland in Western Europe. ➤ Topographically the landscape includes interweaving hills and valleys, contained by low ridges and interlocking hills, resulting in a meandering course for the River Lee, which expands and contracts between hydroelectric dams. ➤ Farran Forest Park is 53 hectares in area and contains stands of coniferous trees and mixed woodland. The main species are Japanese larch, Scots pine, Norway spruce, Douglas fir, beech, ash, oak, sycamore and maple. The Park is also rich in both animal and bird life.
Landscape Designations	➤ County Cork High Value Landscape in Appendix E of the CCDP.
Landscape Sensitivity to Wind Farm Development	The 2007 Draft Landscape Strategy states that ‘ <i>This area is not regarded as a “Strategic Search Area” or a “Strategically Unsuitable Area” for windfarm developments. However, the low rolling hills of this landscape would not lend itself to windfarm development and such developments would dominate the surrounding landscape.</i> ’. In consideration of these designations, a High landscape sensitivity to wind farm development is assigned for this LCT.
Visibility of the Cleanrath wind farm development within the LCT	The ZTV mapping indicates that there is full theoretical visibility of the Cleanrath wind farm development in the western region of the LCT, south of Macroom. The landscape is characterised by the presence of hedgerows, scrub and woodland, these vegetational elements in conjunction with the weaving and hilly nature of the topography provide lots of intermittent screening with the potential to obstruct views of the Cleanrath wind farm development. As it extends easterly away from the site, the vast majority of this LCT is located over 15 Kilometres from the site where visibility is greatly compromised by distance.
Cumulative Baseline	There are currently no operational or permitted wind farms within this LCT. Therefore, the Cumulative Landscape Status is: 1. Landscape character area with no wind turbines
Cumulative Landscape Effects	The Cleanrath wind farm development does not change the status identified above. Therefore, cumulative landscape effects are considered Low .
Magnitude of Change	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.

LCT 8 - Hilly River and Reservoir Valley	
Significance of Effect	High x Slight = Moderate/Minor = Moderate (EPA, 2017) 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"> ➤ Screening provided by vegetation and topography located between visual receptors and the constructed turbines has the effect of either removing views altogether, removing large numbers of turbines from a view or making those views of the turbines intermittent in nature. ➤ The factor of distance greatly mitigates landscape effects of the Cleanrath wind farm development.

LCT 10a - Fissured Fertile Middleground (South of the Gearagh)	
Distance from site to Nearest/Furthest Area of LCT	This LCT is approximately 9.5 kilometres east of the nearest turbine at its closest point, and 24.6 kilometres at its furthest.
LCA Key Characteristics	<ul style="list-style-type: none"> ➤ This landscape type has characteristics of both the flatter fertile farmland areas and the higher marginal hilly farmland. ➤ Elevated landscape, which is fissured by rivers and their valleys fairly gentle slopes, with reasonably fertile agricultural land comprising a mosaic of small to medium sized fields with broadleaf hedgerows. ➤ It is a reasonably fertile farming landscape comprising a mosaic of medium sized fields but also includes the occasional small marginal field. Moving east there are larger fields with mature trees and hedges as field boundaries. ➤ Hedgerows are typically broadleaf but this can include or be replaced by gorse higher up with punctuation given here and there by conifer shelterbelts. ➤ Given the elevation of the landscape and resulting exposure, most hedgerows are fairly low. Some of these broaden into swaths of coniferous plantation or merge with more extensive copses of broadleaf trees.
Landscape Designations	➤ Not a <i>County Cork High Value Landscape</i> in Appendix E of the CCDP.
Landscape Sensitivity to Wind Farm Development	The 2007 Draft Landscape Strategy states that ‘ <i>There are numerous areas in this LCT that have been identified under the County Development Plan as “Strategic Search Areas”. The majority of these areas are found to the northwest and west of this landscape type and the rest are scattered to the centre and east. Currently Windfarms are not a feature of the landscape but as much of the landscape is generally preferred location for Windfarms, they may become more prominent in the future.</i> ’ In consideration of these designations, a Low landscape sensitivity to wind farm development is assigned for this LCT.
Visibility of the Cleanrath wind farm development within the LCT	The ZTV mapping indicates that there are small areas of partial and full theoretical visibility of the Cleanrath wind farm development in the north western region of the LCT.
Cumulative Baseline	There are currently no operational or permitted wind farms within this LCT. Therefore, the Cumulative Landscape Status is: 1. Landscape character area with no wind turbines
Cumulative Landscape Effects	The Cleanrath wind farm development does not change the status identified above. Therefore, cumulative landscape effects are considered Low .
Magnitude of Change	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.

LCT 10a - Fissured Fertile Middleground (South of the Gearagh)	
Significance of Effect	Low x Slight = Minor/Negligible = Not Significant (EPA, 2017) An effect which causes noticeable changes in the character of the environment but without significant consequences.
Mitigation Factors	<ul style="list-style-type: none"> ➤ Very limited visibility of the Cleanrath wind farm development due to topographical landform. ➤ The factors of distance from the Cleanrath wind farm development mitigates any landscape effects.

LCT 13a - Valleyed Marginal Middleground	
Distance from site to Nearest/Furthest Area of LCT	This LCT is approximately 2.5 kilometres north-east of the nearest turbine at its closest point, and 22.1 kilometres at its furthest.
LCA Key Characteristics	<ul style="list-style-type: none"> ➤ Topographically this landscape comprises low rounded hills of old red sandstone enclosing fairly broad undulating river valleys. ➤ The rivers are the middle to upper levels of the River Lee and Sullane River before they join together as the River Lee. ➤ Small to medium sized fields are of marginal quality consisting of uncultivated peaty soils, and include clumps of willow, birch, heather, bracken and the occasional rock outcrop and low broadleaf hedgerows bound them. Stonewalls are a feature of the landscape in the upland areas. ➤ Coniferous plantations are mostly located on higher ground.
Landscape Designations	➤ Not a <i>County Cork High Value Landscape</i> in Appendix E of the CCDP.
Landscape Sensitivity to Wind Farm Development	The 2007 Draft Landscape Strategy states that ‘ <i>Strategic Search Areas have been identified as being suitable for wind energy development to the north east of Macroom around the area of Ballynagree</i> ’. There is no wind farm sensitivity reported for the south west of the LCT, therefore, a Moderate landscape sensitivity to wind farm development is assigned for this LCT.
Visibility of the Cleanrath wind farm development within the LCT	The ZTV mapping indicates that there are large areas of full theoretical visibility of the Cleanrath wind farm development in the southern region of the LCT where it lies in close proximity to the Cleanrath wind farm development site. There are intermittent patches of full theoretical visibility at high elevations to the north-east of the Cleanrath wind farm development. The presence of forestry and other vegetation screening has the potential to mitigate views of the Cleanrath wind farm development from within the LCT.
Cumulative Baseline	<p>The Bawnmore 1/ Kilberriherth wind farm is located in the north easterly region of this LCT, it is located 17.8 km from the Cleanrath wind farm development at its nearest point. Therefore, the Cumulative Landscape Status is:</p> <p>2. Landscape character area with occasional wind turbines in it and/or intervisible in another landscape character area/s</p>
Cumulative Landscape Effects	The Cleanrath wind farm development does not change the status identified above. Any cumulative landscape effects induced by the Bawnmore 1 / Kilberriherth wind farm are greatly mitigated by distance, therefore, cumulative landscape effects are considered Low .
Magnitude of Change	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	<p>Moderate x Slight = Minor = Slight (EPA, 2017)</p> <p>An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.</p>

LCT 13a - Valleyed Marginal Middleground	
Mitigation Factors	> Landscape effects are indirect.

LCT 15b – Ridged Peaks and Uplands	
Distance from site to Nearest/Furthest Area of LCT	This LCT is approximately 6.6 kilometres north-west of the nearest turbine at its closest point, and 23.3 kilometres at its furthest.
LCA Key Characteristics	<ul style="list-style-type: none"> ➤ Comprises a rolling mountainous topography at a relatively high elevation and includes the southern slopes of the Boggeragh Mountains. ➤ Soils are of low fertility and experience relatively high levels of rainfall due to its elevation, resulting in poor growing conditions and limited vegetation including moorland, heath and scrub. ➤ Isolated or clusters of fields, are scattered along lower slopes, giving this landscape type a small scale dimension, to the otherwise open moorland. ➤ Large tracks of coniferous forestry evident particularly in upland areas. ➤ There are patches of fertile land within the landscape. ➤ The main agricultural practice in these upland areas is sheep farming. ➤ Field boundaries comprise mainly stone walls and low hedges. ➤ With forestry over the landscape (not blocks as in other areas). Delineated by tight gorse hedgerows, walls, banks or post and wire fencing and punctuated by a coniferous or broad leaf shelterbelts around small farmsteads.
Landscape Designations	➤ Not a <i>County Cork High Value Landscape</i> in Appendix E of the CCDP.
Landscape Sensitivity to Wind Farm Development	The 2007 Draft Landscape Strategy states that ‘ <i>Windfarms can be seen off in the distance from certain elevated views within this landscape type. While their presence is noted, their visual impact is not major but an accumulation of more windfarms could have a more intolerable visual impact in the future</i> ’. Therefore, a Moderate landscape sensitivity to wind farm development is assigned for this LCT.
Visibility of the Cleanrath wind farm development within the LCT	The ZTV mapping demonstrates one large area of full theoretical visibility located to the north of Ballyvourney on the Cork-Kerry county border on the southern flanks of the Derrynasaggart Mountain Range. There are minimal visual receptors in this remote area due to the absence of roads or settlements. The N22 National road does pass through this area of full theoretical visibility; however, the road is facing away from the Cleanrath wind farm development and there is significant screening from an embankment and vegetation on the roadside.
Cumulative Baseline	The Curragh, Gneeves, Gneeves Extension, Caherdowney and Bawnmore 2 wind farms are located in the northerly region of this LCT (>13 km from the Cleanrath wind farm development). The permitted Knocknamork wind farm is located in the central region of this LCT (>11 km from the Cleanrath wind farm development). Therefore, the Cumulative Landscape Status is: 3. Landscape character area with wind turbines
Cumulative Landscape Effects	The Cleanrath wind farm development does not change the status identified above. Any cumulative landscape effects are greatly mitigated by distance and theoretical visibility, therefore, cumulative landscape effects are considered Low.
Magnitude of Change	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

LCT 15b – Ridged Peaks and Uplands	
	not over a wide geographical area. The effects could potentially be medium to short term and/or reversible.
Significance of Effect	Moderate x Slight = Minor = Slight (EPA, 2017) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Mitigation Factors	<ul style="list-style-type: none"> ➤ Landscape effects are indirect. ➤ Cumulative effects are greatly mitigated by distance and theoretical visibility.

LCT 16a - Glaciated Cradle Valleys	
Distance from site to Nearest/Furthest Area of LCT	This LCT is approximately 8.8 kilometres south-west of the nearest turbine at its closest point, and 22.2 kilometres at its furthest.
LCA Key Characteristics	<ul style="list-style-type: none"> ➤ Some forestry but located on the side of the elevated area. ➤ At the centre of this LCT is Gougane Barra a scenic area. It is evident why this is a tourist area due to its historical and picturesque setting with the lake and dramatic background. ➤ To the south is the more enclosed Gougane Barra Forest Park. ➤ To the south the valley is very lush with evidence of farming and farm buildings. ➤ The roadside is lined with ditches and bushes. ➤ The area is very dramatic to the west as the road climbs slowly up the area towards the Kerry border. ➤ This is a landscape formed by intensive glacial erosion, leaving armchair-like forms gouged out of the mountain side. Gougane Barra provides an excellent example of these. ➤ The mountain sides are steeply scarped, falling to a flat but limited valley floor which typically accommodates a small lake and/or river. In the case of Gougane Barra, the river in question is the Lee, which rises here meandering its way to the sea at Cork Harbour in the east.
Landscape Designations	➤ County Cork High Value Landscape in Appendix E of the CCDP.
Landscape Sensitivity to Wind Farm Development	The 2007 Draft Landscape Strategy states that ‘ <i>This LCT has great landscape sensitivity hence the area is identified as “Strategically Unsuitable” for windfarm development. Such developments would dominate the surrounding landscape</i> ’. Therefore, a High landscape sensitivity to wind farm development is assigned for this LCT.
Visibility of the Cleanrath wind farm development within the LCT	The ZTV mapping indicates that there are only a few areas of full theoretical visibility of the Cleanrath wind farm development. The areas of full theoretical visibility are located at the north-eastern extent of the LCT and are only present at high elevations where there are no roads or settlements. Steep topographical terrain and the presence of significant vegetation screening in the valley floor will greatly reduce the capacity for viewing the Cleanrath wind farm development from this LCT.
Cumulative Baseline	There are currently no operational or permitted wind farms within this LCT. Therefore, the Cumulative Landscape Status is: 1. Landscape character area with no wind turbines
Cumulative Landscape Effects	The proposed development will not change the status identified above. Therefore, cumulative landscape effects are considered Low .
Magnitude of Change	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, 2017) An effect which causes noticeable changes in the character of the environment without affecting its sensitivities

LCT 16a - Glaciated Cradle Valleys	
Mitigation Factors	<ul style="list-style-type: none"> > The Steeply scarped valleys in this LCT provide topographical screening of the Cleanrath wind farm development. > The absence of roads or settlements with theoretical visibility of the Cleanrath wind farm development reduces the influence of any visual or landscape effects caused by the Cleanrath wind farm development. > Landscape effects are indirect.

LANDSCAPE CHARACTER ASSESSMENT

**APPENDIX 13-2: CLEANRATH
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