



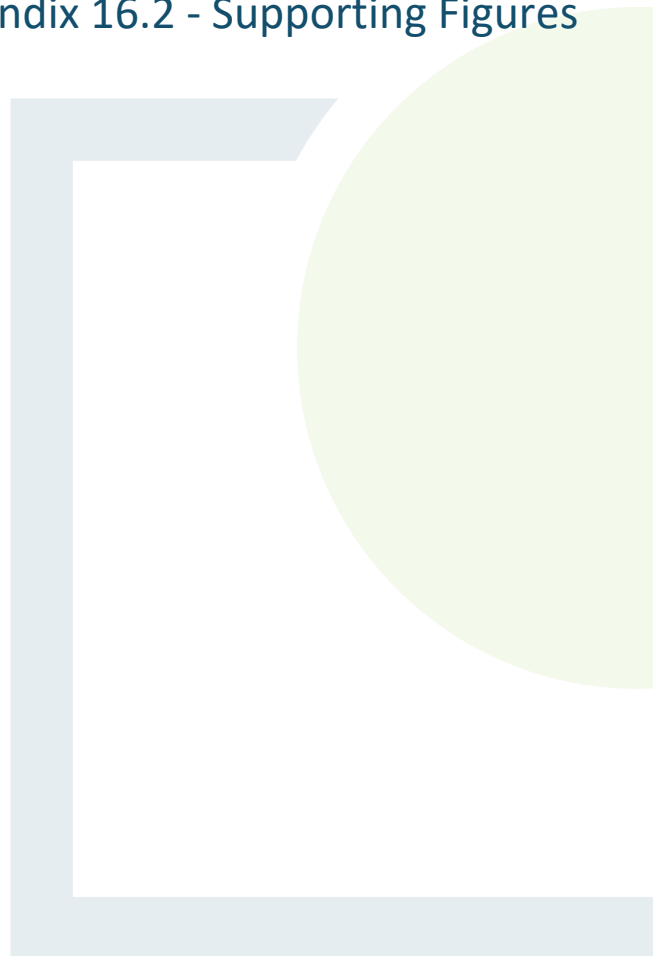
DESIGNING AND DELIVERING
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APPENDIX 16

LANDSCAPE AND VISUAL

Appendix 16.1 – Visual Impact Assessment at VP's

Appendix 16.2 - Supporting Figures



APPENDIX 16.1

Visual Impact Assessment at VP's

VP No.	Existing View	VP Sensitivity	Visual Impact Magnitude	Significance / Quality / Duration of Effect
VP1	Local road at Cushina- This is a filtered view of a typical midlands scene, afforded from a local road approximately 700 m west of the nearest turbine. The view encompasses low-lying agricultural fields on both sides of the road in the foreground, enclosed to the north and south by dense groupings of mature trees and shrubs. Overall, the landscape within this view appears ostensibly flat and is largely obscured beyond the fore-to-middle ground by mixed, mature vegetation. This view is representative of that seen from some nearby residential dwellings to the south and west, which may afford a comparable outlook.	Medium-low	All nine turbines of the Proposed Development are clearly visible, emerging behind intervening vegetation in the near distance. The two outermost turbines are more prominently presented due to their closer proximity, while the remainder of the scheme appears at a notably reduced scale. This arrangement contributes to a sense of scale and spatial depth across the view. The central turbines are perceived in two condensed clusters, with a degree of turbine overlap that introduces a sense of visual clutter. The turbines extend across a broad lateral extent which, in line with the Wind Energy Development Guidelines, is considered to be appropriately absorbed within the 'Flat Peatland' landscape character type. Nonetheless, the Proposed Development introduces tall, kinetic, structures into a working rural landscape that is currently characterised by a low level of built development. On balance, the magnitude of visual effect is assessed as High.	Substantial-moderate / Negative / Long term
VP2	R419 at Clonsast Lower – This is a southeast-facing view of a typical agricultural landscape, observed from the R419. The view depicts an agricultural field in the fore-to-midground, enclosed by a field boundary consisting of mixed hedgerows and groupings of mature trees. A dwelling and a collection of farm buildings contain the view to the east. Layers of stacked hedgerows encompass the remainder of the view. This view is afforded to users of the R419, along with several nearby residential dwellings that experience a similar outlook.	Medium-low	Seven of the proposed turbines are visible to varying extents, while two are completely screened by vegetation. The Proposed Development forms a distinct feature in the near distance, set against a backdrop of mixed vegetation and sky. The turbines present a moderate lateral extent with relatively even spacing. Although there is a minor instance of turbine overlap, this is moderated by the otherwise clear and coherent layout of the scheme. Most notably, the Proposed Development introduces tall, kinetic structures into a primarily rural landscape. However, the turbines do not obstruct any distant views, nor do they appear out of place within this working rural context. For these reasons, the magnitude of visual impact is deemed to be High-medium.	Moderate/ Negative / Long-term

VP3	Spencer Bridge, Grand Canal – This is a southwest facing view observed from the western periphery of the settlement of Rathangan. The foreground is defined by Spencer Bridge, a stone arch bridge built from grey limestone. Below it, the Grand Canal runs laterally through the middle ground with the Barrow Way trail running parallel to the canal. The background comprises of a dense line of mature trees, a mix of evergreen and leafless deciduous species, with views of agricultural fields and farm buildings beyond. This view is representative of the scenic view GC37 and scenic route 38 within the Kildare CDP, the Barrow Way along with being a general representation of the settlement of Rathangan.	High-Medium	Glimpse views of turbine blade sets can occasionally be seen through the intervening vegetation. However these views are not readily discernible nor do they detract from any sense of visual amenity observed of the canal or Spencer Bridge. Negligible.	Imperceptible / Neutral / Long-term
VP4	Ellistown GAA Club – This is a west facing view afforded from the Ellistown GAA Club. The foreground features a well-maintained GAA pitch, enclosed by a metal railing. Tall floodlights are positioned throughout the view. In the midground, the main playing field dominates, framed by goalposts and lined with fencing and boundary markers. The background is made up of mature deciduous trees and hedgerows. This view is afforded to users of the GAA pitch along with a collection of nearby dwellings.	Medium-low	The Proposed Development is entirely screened by a succession of terrain and vegetation. Thus, the magnitude of visual impact is deemed Negligible.	Imperceptible / Neutral / Long-term
VP5	R442 at Bracknagh- The foreground features a roadside verge and trimmed hedgerow. A flat, agricultural field extends across the midground, bordered by continuous hedgerows.	Medium-low	The Proposed Development is a distinct feature within the middle distance of this view. All nine turbines are visible to varying extents, emerging behind intervening vegetation. At a distance of 1.6 km, the turbines appear prominent, though not overbearing, within the view.	Moderate / Negative / Long term

	The background includes scattered mature trees, coniferous treeliness, and a few distant agricultural buildings and houses. This view is afforded to the nearby settlement of Bracknagh and road users of the R419.		The turbines are well spaced, resulting in a generally clear and legible layout. Although the full scheme is fully discernible, three of the central turbines are afforded partial screening from an intervening hedgerow. While views of blade sets rotating against skyline vegetation introduces a minor sense of visual irritation, it also serves to moderate the perceived scale and intensity of the Proposed Development. The introduction of tall, kinetic structures into an otherwise rural, working landscape increases the presence of utilitarian infrastructure within the scene. However, the turbines do not obstruct distant views, nor do they appear incongruous within this context. On balance, the magnitude of visual change is assessed as Medium.	
VP6	Grand Canal Bridge near Monasterevin – This is a filtered view observed from a bridge over the Grand Canal. It is identified in the Kildare County Development Plan as a designated scenic view (GC28). The northwest-facing view is afforded to users of the Barrow Way (which bypasses to the west) and also provides a general representation to the community of Monasterevin. A series of tall deciduous trees in the immediate vicinity to the west allow glimpse views of the intensively managed agricultural pastures beyond (during winter months). The remainder of the view comprises agricultural fields, tightly framed by a network of hedgerows, with distant views of mountains to the west. Existing wind turbines are visible on the horizon in the far distance.	High-medium	From this location, the proposed turbines are almost entirely screened by a foreground tree. Occasional glimpse views of blade tips are visible through gaps in the tree cover. However, a more open view of the Proposed Development is possible in the immediate vicinity (as evidenced by the wireframe image). At a viewing distance of over 4.5 km, the turbines would form a discernible but recessive element within the context of this view. The proposal would marginally increase the presence of wind energy infrastructure and built form on the skyline. However, in the case of this designated view—where the key sense of amenity is derived from the Grand Canal corridor in the immediate foreground—the Proposed Development is not considered to detract from any sense of visual amenity experienced at this location. Thus, the magnitude of visual impact is deemed Low.	Slight / Negative-neutral / Long-term
VP7	Macartney Lock Bridge, Grand Canal – This is a northwest-facing view from a bridge along the Grand Canal, approximately 3.9 km from the proposed turbines. The view is representative of GC1 from the Kildare County Development Plan, the Barrow Way, and a nearby dwelling to the north.	High-medium	Glimpse views of the turbine blade sets can be seen in the near distance amongst a context of intervening vegetation. The upper hubs and blades of the southern turbines are discernible, while only fleeting views of the northern components are revealed through gaps in the foreground cover.	Slight / Negative-neutral / Long-term

	It is heavily truncated by layers of mixed vegetation. Although this is a designated scenic view, in this instance, the most susceptible views are in the immediate vicinity to the north and south along the canal, rather than in the direction of the Proposed Development, which represents a more robust rural landscape.		However, in the context of this view—where visual attention is primarily drawn to the Grand Canal in the foreground—the brief and partially filtered turbine visibility does not markedly detract from the primary sense of amenity which is focused on the Grand Canal. Consequently, the magnitude of visual impact is deemed Low.	
VP8	R442, Clonbulloge – This is a slightly elevated, southwest-facing view from St. Patrick’s Bridge across the River Figile. The view extends over a flat agricultural field, bordered by layers of mature trees and treelines. The meandering river corridor can be seen running away from the viewer to . This view is generally representative of what residents of Clonbulloge may experience.	Medium-low	The proposed development will not be visible from here due to screening by intervening terrain and vegetation in the direction of the proposed development. Thus, the magnitude of visual impact is deemed Negligible by default.	Imperceptible / Neutral / Long Term
VP9	Walsh Island- This is a southeasterly view across a typical midlands agricultural landscape, observed from a local road near the settlement of Walsh Island. The view is representative of both local residents and road users in the area. It encompasses a series of productive agricultural fields, framed by a tight network of hedgerows. Several groups of mature trees truncate the view to the southeast, and a number of farmhouses are nestled within the vegetation in the distance. Layers of vegetation and distant mountain views complete the remainder of the scene.	Medium-low	The proposed turbines form a discernible feature in the background, set against a backdrop of mixed vegetation and the skyline. The layout presents a slight central intensity, with a degree of turbine overlap contributing to a minor perception of visual clutter. Most notably the proposed turbines introduce tall, kinetic structures into this primarily rural context that is currently characterised by low levels of built development. For the reasons outlined, the magnitude of visual impact is deemed to be Medium-Low.	Moderate-slight / Negative / Long Term

VP10	Local road at Clonavoe – This is a south-facing view from a local road, located 6.4 km from the nearest turbine. The view includes an agricultural field in the foreground, bordered by a low hedgerow and layers of mixed vegetation. Several farm sheds are visible behind the hedgerow. The remainder of the view is enclosed by further layers of vegetation. This view is experienced by a number of nearby residential dwellings as well as users of the local road.	Medium-low	Fleeting views of two turbine blade sets can be partially viewed through the intervening vegetation with the remainder of the turbines screened entirely by a succession of terrain and vegetation. The turbines are not readily discernible, nor do they notably detract from the working rural landscape. Overall, the magnitude of visual impact is deemed Negligible.	Imperceptible / Neutral / Long-term
VP11	R402 near Mountlucas- This is a southeast-facing view from the R402 road. The view includes a patch of rough grass and a dense cluster of vegetation to the east. The existing 28-turbine Mount Lucas Wind Farm is the focal point in the near distance, emerging from the cutaway peatland. Layers of dense vegetation and agricultural farmland make up the remainder of the view.	Medium-low	The proposed development will not be visible from here due to screening by intervening terrain and vegetation in the direction of the proposed development. Thus, the magnitude of visual impact is deemed Negligible by default.	Imperceptible / Neutral / Long-term
VP12	Designated Scenic Route, R402- The view is a broad, elevated, southeast-facing panorama offering expansive vistas over a rural landscape, characterised by agricultural fields bounded by hedgerows and dispersed farmsteads. Layers of regenerating scrub fringe the peatland, which occupies the majority of the middle distance. Rolling farmland is visible in the distant background. Several existing wind farms are located along the horizon, forming a defining feature of the backdrop.	High-medium	The Proposed Development is faintly visible in the background of this view at a distance of over 17 km. The turbines appear along the skyline with low visual contrast. There is clear spatial separation between the Proposed Development and the existing wind farms on either side, and the proposed turbines appear perceptibly smaller than those that are currently operational. However, this does not give rise to a perception of scale conflict as it is clear that the proposed turbines are further distant than their existing counterparts. Nonetheless, the proposed turbines contribute to a minor increase in the intensity of wind energy infrastructure within this vast vista, reinforcing an emerging pattern of development that is becoming a more defining feature of the wider view. On balance, the magnitude of visual effect is assessed as Low–negligible.	Slight-imperceptible / Negative-neutral / Long Term

VP13	River Barrow, Portarlinton– This north-easterly view is experienced from the banks of the River Barrow, on the outskirts of Portarlinton. The foreground and middle ground are characterised by an undulating agricultural field with patchy vegetation, including weeds and sporadic scrub. The remainder of the view is framed by dense layers of vegetation, which limit visibility. This view is broadly representative of Portarlinton and those passing through the local area.	Medium-low	Partial views of the blade sets of the proposed turbines appear through and beyond the skyline vegetation in the middle distance. The upper hub and blade set of the northernmost turbine affords some legibility to a view of the proposed development that is otherwise limited to turbine blades. However, the ambiguity associated with the partial view of the turbines is balanced by the considerable degree of screening. Overall, the magnitude of visual impact is deemed Low-negligible.	Slight-imperceptible/ Negative-neutral / Long term
VP14	Tirhogar Drive, Killenard – This is an open view of a gently undulating agricultural field, observed from a local road on the northern edge of Killenard. The north-easterly view is broadly representative of the settlement of Killenard and the nearby residential dwellings in the vicinity. The agricultural field occupies the majority of the foreground and middle ground, with a two-storey residential dwelling visible to the northeast. Hedgerows and surrounding agricultural farmland make up the remainder of the view.	Medium-low	Although the wireline image shows the potential for the view of one blade tip above the intervening ridge, it will not be discernible once vegetation is accounted for. Thus, the magnitude of visual impact is deemed Negligible.	Imperceptible / Neutral / Long-term
VP15	Local Road at Trascaan - This is a contained, northeast-facing view observed from a local road, overlooking an arable field framed to the west by a residential hedge and treeline and to the east by a rural hedgerow field boundary. The field is truncated in the middle distance by several dense layers of vegetation. This view is available to several nearby dwellings, which are likely to experience a similar outlook.	Medium-low	The Proposed Development is a distinct feature in the near-middle distance, rising above the densely vegetated skyline. Clusters of vegetation along the field boundaries partially screen the eastern portion of the scheme, limiting the visibility of approximately half of the turbines. Two turbines appear with a slight degree of overlap, introducing a minor sense of visual clutter; however, this is moderated by the regular spacing of the remaining turbines, which rotate clearly above the horizon line resulting in a clear and legible view. Most notably, the Proposed Development introduces tall, kinetic structures into a predominantly rural setting, that otherwise has low levels of built development. For the reasons outlined, the magnitude of visual impact is deemed to be Medium.	Moderate-slight/ Negative / Long term

VP16	L1002 in Pollagorteen- This is a relatively enclosed, east-facing view from a local road approximately 1.6 km west of the proposed turbines. A number of residential dwellings dispersed along the road, as well as road users, are afforded a similar view. The scene depicts an agricultural field framed to the north and south by vegetation. A high proportion of marshy grassland is spread across the field, which is typical of the area due to its high water table. The remainder of the view consists of layers of regenerating, mixed vegetation.	Medium-low	The Proposed Development is clearly visible in the middle distance of this view, with all turbines rising prominently above intervening vegetation. There is a variation in the perceived scale of turbines relative to distance creating a clear sense of depth and perspective across the array. From this angle, the lateral spread of the development is modest. Two turbines exhibit a high degree of overlap, contributing to a degree of visual clutter, which is accentuated by the presence of overhead powerlines in the foreground. Nonetheless, the remainder of the layout remains readily legible with blade sets predominately rotating freely above the skyline. The relatively even turbine spacing aligns with the pattern recommended in the Wind Energy Development Guidelines for 'Flat Peatland' landscapes. Most notably, the proposed development introduces tall, kinetic structures into what is currently a predominantly static rural landscape, markedly increasing the level of built development within this view. On balance, the overall magnitude of visual impact is assessed as Medium.	Moderate / Negative / Long term
VP17	Grand Canal at Courtwood– This is a pleasant, north facing view of the Grand Canal afforded from the Cortwood Bridge. The view encompasses the canal extending through the centre of the scene, flanked by grassy embankments and mature woodland trees. To the left, low agricultural buildings and fields can be seen in the near distance. A dense corridor of woodland planting truncates the view to the north. The view is representative of recreationalists along the Barrow Way.	Medium	Partial views of blade tips of the Proposed Development are visible above the tree line in the distant northerly view with the remainder of turbines screened by dense intervening vegetation. Whilst partial view introduces a minor sense of ambiguity relating to scale, distance and context, given the viewing distance of over 11km and the limited visual presence of the turbines, they are not considered to notably detract visual amenity. On balance, the magnitude of visual impact is assessed as Low–Negligible.	Slight-imperceptible / Negative – neutral / Long term
VP18	Baylough Bridge, River Barrow - This is a heavily enclosed, north-facing view, defined by dense riparian vegetation and mature hedgerows that restrict visibility.	Medium	The blade tips of several of the proposed turbines are partially visible above an intervening tree line in the near distance, with the remainder of the turbines fully screened from view.	Slight / Negative-Neutral / Long term

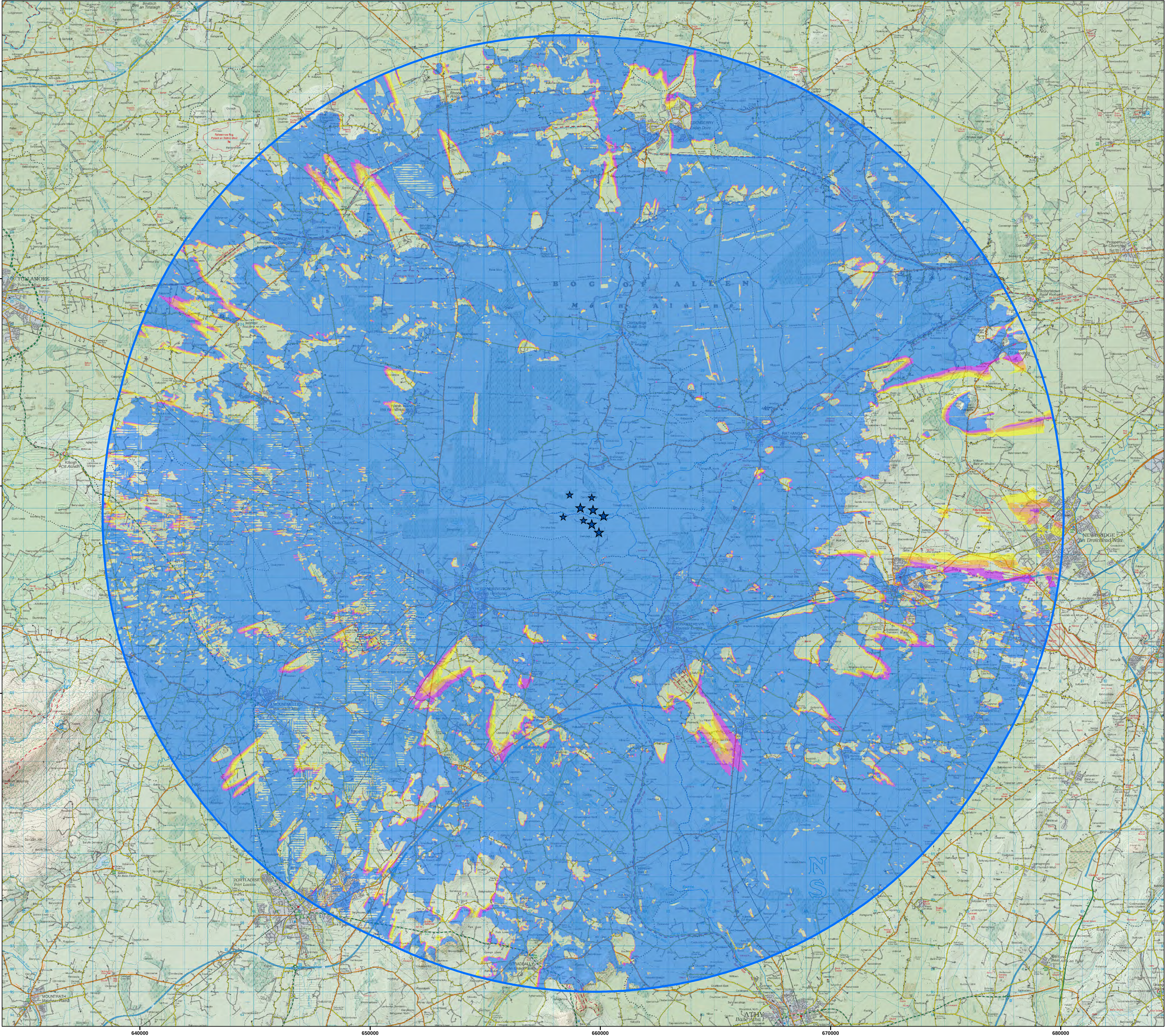
	The River Barrow flows through the right-hand portion of the scene, partially concealed by overhanging tree cover. While seasonal leaf fall increases the permeability of the vegetation in this view, it is likely to become even more enclosed when the vegetation is in full leaf. This view is representative of designated scenic view RB8 as identified in the Kildare County Development Plan.		While partial views of rotating blades against the treeline may introduce a minor sense of visual distraction, this is moderated by the separation distance and limited visual presence of the heavily screened development. In this context, it is not considered that the Proposed Development would materially diminish the visual amenity at this location, as the primary focus of visual interest is directed toward the River Barrow corridor in the foreground. On balance of the reasons outlined above, the magnitude of visual impact is deemed Low.	
VP19	Emo Court House – This is a long, open view directed northwards from the formal grounds of Emo Court Demesne. It extends across a broad parkland setting, defined by open grassland in the foreground and framed by woodland belts in the middle and far distance. The lake is partially visible through a break in the tree cover. Dense layers of vegetation enclose the remainder of the view. This view is representative of that experienced by visitors to Emo Court House and Demesne.	Medium	The Proposed Development is screened entirely by a succession of intervening terrain and vegetation. As a result of the above reasons, the magnitude of visual impact is deemed Negligible.	Imperceptible / Neutral / Long term
VP20	R420 southeast of Clonygowan – This is a north-easterly view observed from the R420 near the settlement of Clonygowan. The scene is defined by a regional road bordered by trimmed hedgerows and low-lying agricultural fields on either side. A cluster of residential and agricultural buildings is visible in the middle distance. Existing wind turbines form a characteristic feature of the backdrop, with the Moanvane turbines emerging above the intervening vegetation a short distance to the east. This view is representative of both road users and nearby residential dwellings.	Medium-low	The hubs and upper blade sets of the proposed turbines are partially visible, rising above the treeline in the distance. The turbines appear considerably smaller than the existing turbines located to the north highlighting the separation distance between them. Although the overall level of visibility is limited, the Proposed Development contributes to an increased lateral extent and overall presence of wind energy infrastructure in the view. However they remain subordinate to the nearer turbines and less likely to draw attention as a result. On balance, the magnitude of visual impact is deemed to be Low.	Slight/ Negative / Long term

VP21	R401- Designated Scenic Route– This is an elevated, west-facing view from the R401 on the lower slopes of Dunmurry Hill, overlooking a gently undulating agricultural landscape. A rural dwelling and associated garden vegetation are visible in the right foreground, framed by a dense hedgerow. The view extends across a broad mosaic of green fields, hedgerows, and scattered tree groups, with occasional farmsteads punctuating the middle distance. The horizon is defined by a low, wooded ridgeline that provides visual containment and adds a sense of depth to the wider rural setting. It includes the turbines from both of the Moanvane and Mount Lucas wind Farms to the west and northwest respectively. This view is representative of Scenic Route 14 within the Kildare County Development Plan and broadly reflects the designated views from and around Dunmurry Hill.	High-medium	The Proposed Development is distinctly visible in the distance, rising out of a uniform apron of lowland groundcover. The turbines are seen in a loose linear arrangement from base to tip with a couple of minor instances of overlap, but in a legible manner overall. There is some lateral overlap with the Moanvane Wind Farm beyond, but given the scale disparity between the two sets of turbines, it is clear they are from two distinct and generously separated developments. Nonetheless, the overall lateral extent and intensity of wind energy development within the broad vista is considerably increased by the proposed development, which is the nearest of the wind farms. In this regard it represents an intensification of a familiar form of development, but one that remains heavily subordinate to the matrix of lowland agricultural land use. On balance, the magnitude of visual impact is deemed to be Low.	Slight / Negative / Long term
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APPENDIX 16.2

Supporting Figures

ZTV (Zone of Theoretical Visibility) indicating the areas that have a potential view of the proposed turbines at Derrynadarragh Wind Farm (Tip Height 186-187m)



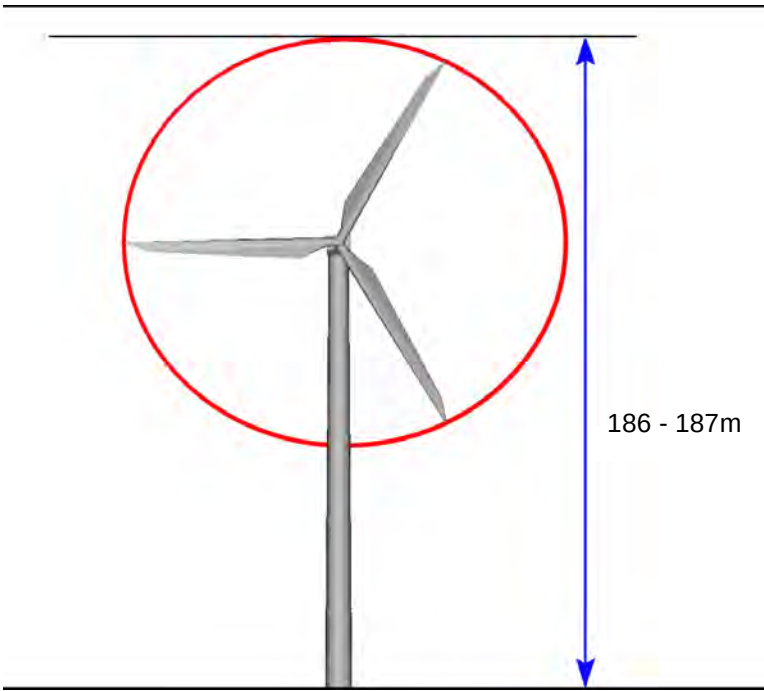
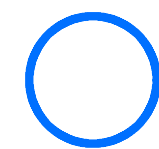
Proposed Turbines

- ★ Tip Height 186m
- ★ Tip Height 187m

No. Turbines Visible

- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9

20km Study Area



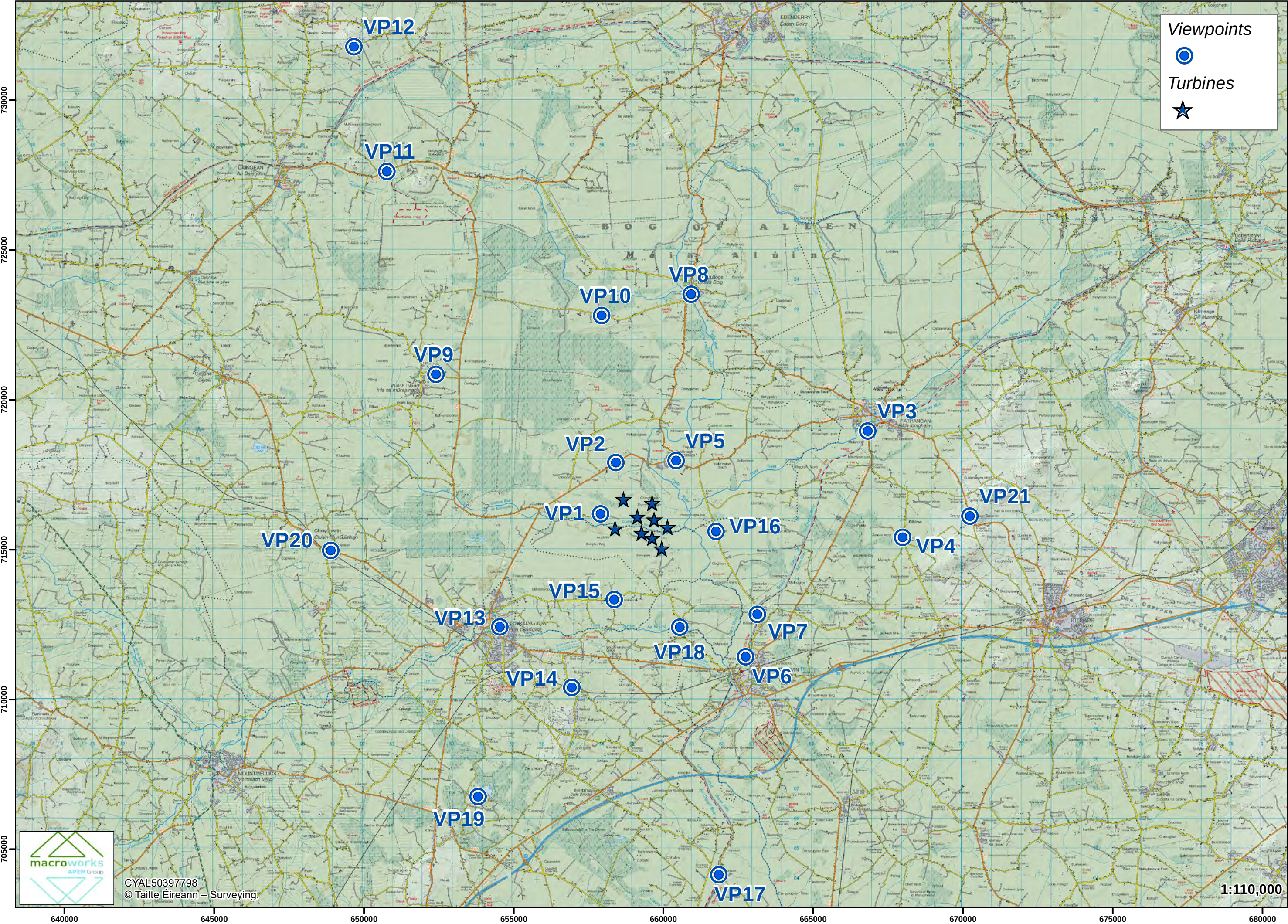
This ZTV map is based on the potential to see any part of the proposed turbine/s from the tip to base in a theoretical bare-ground scenario i.e. without accounting for screening by vegetation and/or buildings.

Observer Height assumed: 1.7m to eye-level height
Tip Height: 186-187m

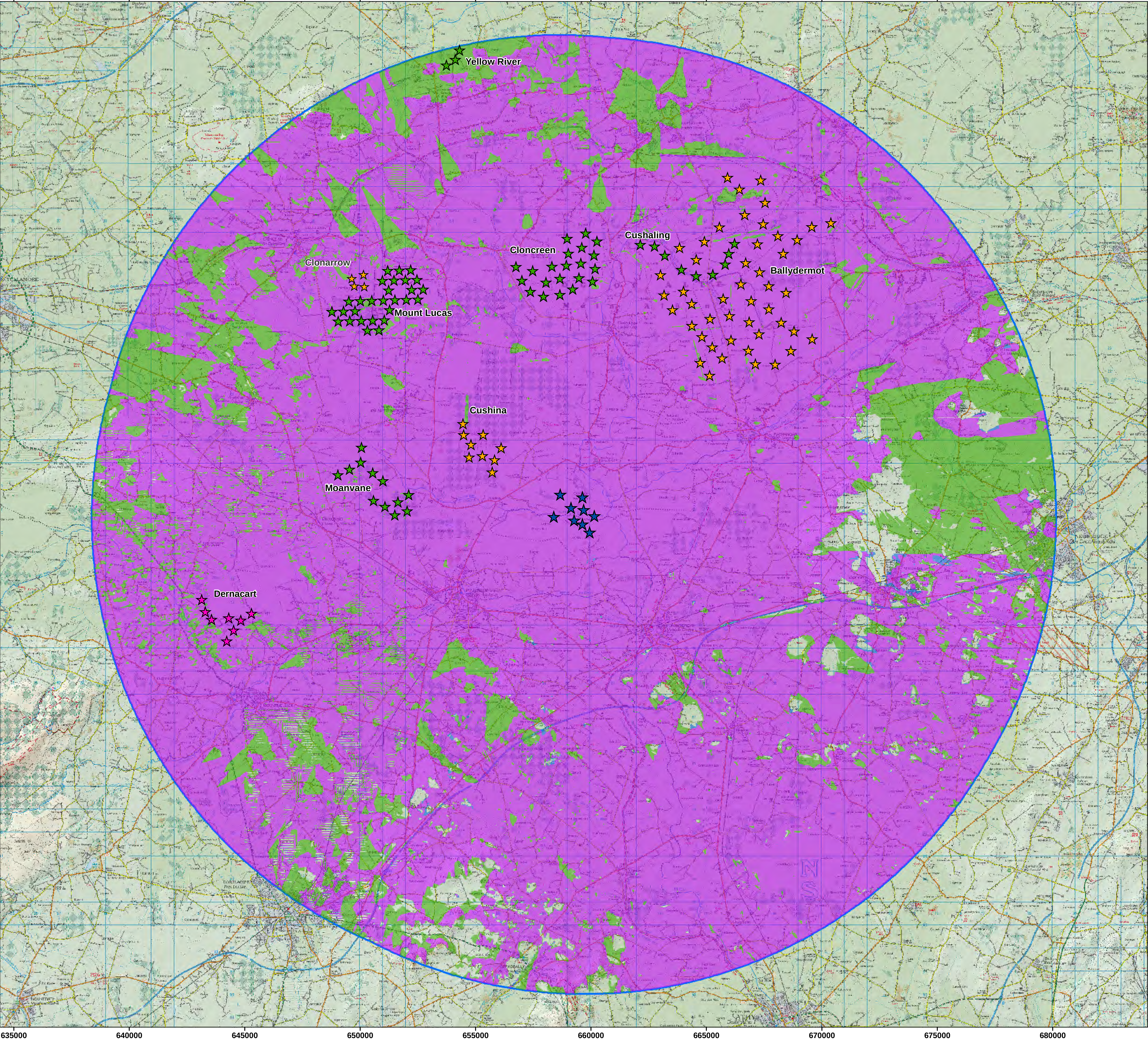
Scale: 1:80,000 if printed @ A1 size



Viewpoint locations selected for the Derrynadarragh Wind Farm project



ZTV indicating the cumulative theoretical visibility of the proposed Derrynadarragh Wind Farm in combination with the potential future cumulative scenario



Proposed Turbines



Existing Turbines



Permitted Turbines



In-Planning Turbines



Wind Farm Visibility

13.7% Visibility of existing, permitted or in-planning turbines only

82.9% Visibility of proposed turbines as well as existing, permitted or in-planning turbines only

0.3% Visibility of proposed turbines only

3.2% of the entire study area to 20km will not have any view of the turbine blades of the proposed Wind Farm or that of any existing, permitted or in-planning turbines

20km Extent



This ZTV map has been calculated such that a turbine registers as been theoretically visible to observers in the surrounding landscape once there is an unobstructed line of sight to its blade tip.

Observer Height assumed: 2m to eye-level height
Blade Tip Heights: Variable

Note: This ZTV map is calculated for landform screening only and does not take account of the significant screening effects of vegetation (hedgerows, trees) and buildings inherent across the study area.



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