Orsted Onshore Ireland Midco Limited

10: MEMORANDUM RESPONSE TO SUBMISSIONS RECEIVED

LANDSCAPE AND VISUAL AMENITY

Proposed Oatfield Wind Farm Project, Co. Clare: ABP Case No. ABP-318782-24

June 2024

CONTENTS

FIGURES

1 LANDSCAPE AND VISUAL AMENITY

1.1 Introduction

The following memorandum has been prepared to address submissions received during the observations and submissions period associated with the Oatfield Wind Farm Planning Application. The planning application for the aforementioned Proposed Development was submitted to An Bord Pleanála on 22nd December 2023 (ABP Case Number: ABP-318782-24). The period for submissions and observations was 22nd December 2023 to 19th February 2024.

This is memorandum number 10 in the Oatfield Wind Farm submission response documentation, which addresses common themes identified within the discipline of Landscape and Visual (LVIA) (corresponding to **Chapter 14 of the EIAR**, submitted as part of the planning application made to An Bord Pleanála).

Responses to common themes in submissions received from regulatory & prescribed bodies are presented in Section 2, and responses to common themes in submissions received from the general public are presented in Section 3.

Where relevant and as referred to within this document, additional information is included in Appendix 1.

1.2 Statement of authority

This Landscape and Visual response statement was prepared by Cian Doughan, Bachelor of Science in Landscape Architecture and Corporate Member of the Irish Landscape Institute (MILI) with seven years of experience. The chapter was reviewed by Richard Barker (Masters in Landscape Architecture and MILI) of Macro Works Ltd, who has 18 years of experience in the appraisal of effects from a variety of energy, infrastructure and commercial developments.

2 REGULATORY & PRESCRIBED BODIES

2.1 Clare County Council

Section 5.2 of the Clare County Council submission on the Proposed Development relates to 'Visual Amenity'. Whilst the local authority notes the Proposed Development is contained within a 'settled landscape' and is contained within a 'Strategic Zone' in relation to wind energy development and "*would appear in principle to comply with the strategy and also to assist in achieving wind energy targets for 'strategic' areas",* it states that, "*it is clear to the Planning Authority that the proposal would significantly alter the landscape character at this location. Given the height and scale of the turbines as proposed the development would have a significant landscape and visual impacts, both locally and over greater distances from house, roads, villages and amenity locations".*

Indeed, the local authority has given a broad brushstroke classification that the Proposed Development will generate significant landscape and visual effects at a wide variety of locations and receptor types without giving any clear details about where and how specifically these impacts will occur. It should be noted that the local authority has zoned these lands "Strategic" and an area that is "Acceptable in Principle" under the Clare County Development Plan Wind Energy Strategy (WES). In zoning the strategic areas for wind development within the county, due consideration would have been given to a number of factors, including landscape and visual considerations. Therefore, there would have been a level of understanding and acceptance (subject to environmental assessments) that commercial scale wind farm developments could be well accommodated and assimilated into this landscape without undue effects on the surrounding landscape and visual receptors.

The council also put forward the argument that when the wind energy strategy in County Clare was adopted in 2011, they "*recognised turbine heights from 75-125m*", whilst the Department of Housing, Local Government and Heritage's 2006 Wind Energy Development Guidelines (WEDGs) "*defined large turbines as over 100m blade tip*". The response goes on to state that "*it is clear that the heights of the turbines as proposed are not representative of the range of turbines identified in the WES or the 2006 Guidelines*". It is important to note that the Clare WES has formed part of every County Development Plan (CDP) since its inception in 2005. This means that Clare County Council has had several opportunities to update the WES during the several iterations of the CDP up until its current iteration 2023-2029. There has been a consistent upward trend in the scale of wind turbines since the adoption of the WEDGs in 2006. Thus, it is clear that this trend of larger turbines has been a part of the Irish Wind Energy Industry for many years and that Clare County Council has had several opportunities to update their WES to reflect this upward trend. In contrast to this, the 2006 WEDGs stated that *"In 2005, less than 60m to blade tip are considered short, 75-100m medium and over 100m tall"*, whereas the updated draft revised guidelines (2019) removed any reference to this, clearly displaying the understanding that the scale of turbines was increasing.

In terms of LVIA impacts from the Proposed Development, the submitted landscape and visual impact assessment (see **EIAR Chapter 14 Landscape & Visual**) concluded that there would be no significant landscape, visual or cumulative impacts at surrounding receptors as a result of the Proposed Development. Notwithstanding this, there will be

some notable effects at the nearest receptors, with several of the nearest visual receptors (i.e. viewpoint (VP)12, VP16, VP17 and VP18) classified with a residual 'Substantial-moderate' significance of visual effect. It is important to note that these effects are close to significant but are below the significance threshold. Effects that are Substantial and above are considered to be 'significant effects' in the submitted LVIA. In similar circumstances to the visual effects, the Proposed Development will also generate some operational and construction stages landscape effects classified with a residual significance of effect of Substantial-moderate. However, these effects are principally related to the immediate site context and will dissipate rapidly at increasing distances from the site as it becomes a proportionately smaller component of the overall landscape.

2.2 Fáilte Ireland

The submission from Fáilte Ireland notes that the Proposed Development is contained within the Landscape Character Area (LCA) – Slieve Bernagh Uplands, which is described as *"generally remote and rarely enclosed"* and states that the *"higher slopes would be sensitive to very visible development and the skylines of Slieve Bernagh and Woodcock Hill to Ballycar are also designated as high amenity".* It is important to recognise that the Proposed Development is neither directly located along Slieve Bernagh nor is it contained along Woodcock Hill. Instead, it is contained along the Broadford Hills, which have been classified with a 'Strategic' designation in relation to wind energy development, highlighting the robustness of its landscape setting. This part of the LCA – Slieve Bernagh Uplands, is considered much less susceptible to development than the remote areas surrounding Slieve Bernagh and is comprised of more transitional land uses such as pastoral farmland and extensive areas of conifer forestry.

The Fáilte Ireland submission also notes the potential impacts on the amenity value of the 12 O'Clock Hills trails, some sections of which are situated immediately adjacent to the Proposed Development. A full assessment of the impacts on amenity, heritage and recreation is included in the submitted LVIA and is further reinforced in Theme 3 below (see Section 3.3). As part of a submission on another wind farm development in January 2024, Fáilte Ireland noted that the "Irish landscape is one of the primary assets for tourism in the country and has been the cornerstone of international tourism marketing campaigns for decades". It further summarised the visitor attitudes to wind energy development in the Irish landscape, which was outlined in the 2007 'Visitor Attitudes on the Environment' survey (updated in 2012) and the 2018 'Visitor Awareness and Perceptions of the Irish Landscape survey. The key findings of the 2012 and 2018 surveys are included below for reference:

- *Over half saw at least one wind farm in 2012 compared with under half in 2007 and more groups of wind turbines were detected as opposed to just one, as in 2007. Awareness of the existence of wind farms was higher among domestic visitors. As in 2007, in 2012 most wind farms were seen at a distance from the car. However, 2012 saw an increase in the number of farm sightings.*
- *More visitors saw turbines at closer proximity than on the horizon in 2012, versus 2007. Mountain moorland areas were the most prevalent sites where wind farms were seen. Sightings at coastal areas have reduced significantly. Impacts on sight-seeing were less positive in 2012, with a sharp rise in both negative and 'no*

impact' views compared with 2007. Those on countryside breaks, not on activity breaks and over 65s were most negative about wind farms being present when sight-seeing.

- *The majority of participants favour small groups of large turbines over large groups of small turbines When given a choice of groups of 5 or 25 turbines or 2 clusters of 10, the site with 5 turbines scored most positively or neutrally in 2012.*
- *In 2012, seventy-one percent stated that wind farms have either a positive or 'no impact on their likelihood to visit Ireland, while just 24% are averse, leaving 5% saying it depends.*
- *In general, participants were most strongly averse to the constructure of wind farms at coastal area, followed by fertile farmland, in 2012.*
- *In 2018, the results from a major study by Fáilte Ireland on tourism and landscape found that the majority of visitors appeared not to notice the majority of developments – even very large and visually prominent structures such as wind turbines and powerlines. It appears that there are significant divergences between what can be seen and what is noticed. The majority of visible development does not appear to have any adverse effects on the impression of the quality of the landscape.*

In summary, while tourists are likely to notice wind farm developments, the findings of these surveys highlight that wind farm developments do not have a significant bearing on their overall experience of the Irish landscape.

Thus, whilst the Proposed Development will generate some notable visual effects at the 12 O'clock Hills trails, it is not considered that the Proposed Development will result in significant visual effects at these receptors. Although the turbines will be one of the more prominent built features from the nearest sections of these trails, they will not block or heavily obstruct visibility of the wider landscape. The proposed turbines are situated to the south of the main ridgeline, allowing for uninterrupted views across the wider landscape to the west and north, which is one of the principal aspects of visual amenity from the summit of Knockanuarha. Thus, it is not considered that the Proposed Development will detract significantly from visual amenity afforded at the 12 O'Clock Hills.

3 GENERAL PUBLIC

It is important to note that the submitted LVIA was undertaken by Macro Works, one of Ireland's leading landscape and visual consultancies, with their team member's combined experience spanning over 30 years. Macro Works have undertaken assessments on numerous development types throughout Ireland, including 20+ Strategic Infrastructure Development (SID) Wind Farm Developments and 180+ Wind Farm developments. Macro Works' senior LVIA staff are all qualified Landscape Architects and are corporate members of the Irish Landscape Institute. The themes and sub-theme to be addressed are include below;

3.1 Theme 1: Scale and height of the turbines are considered too large for the receiving landscape

One of the concerns relate to the scale and height of the proposed turbines and that they will be 'the biggest Ireland has yet to see', will 'dominate the skyline' and will 'tower over the village' and that there are 'no turbines of this size built anywhere in Ireland or the UK'.

With regard to the proposed 180m tip height turbines in this landscape context, they are not considered to appear out of scale or out of context in this transitional landscape context which is heavily influenced by large-scale landscape features and land uses such as the underlying Broadford Hills and the Slieve Bearnagh Uplands to the north. The scale of the turbines is also well assimilated in regard to the broad underlying land uses, such as the extensive areas of commercial conifer forest plantation that cloak the surrounding hills. This combination of broad scale landform and land use pattern is considered to be appropriate for tall turbines and this design approach is consistent with the WEDGs (2006 and draft revised 2019). The WEDG promotes a design response of tall turbines in both the 'Transitional Marginal Landscapes' and 'Mountain Moorland' landscape types, with which the Proposed Development is most associated. With regard to 'Transitional Marginal Landscapes', the WEDGs state;

> *"In small-scaled enclosed areas, short turbines are preferred in order to avoid their spatial dominance and to ensure visual balance. However, where the upper ground is relatively open and visually extensive, taller turbines may be more appropriate. In terms of perceived height, the profile can be even or uneven, depending on the profile and visual complexity of the terrain involved. The more rugged and undulating, the greater the acceptability of an uneven profile provided it does not result in significant visual confusion and conflict"*.

In relation to the 'Mountain Moorland' landscape type, which is most associated within the elevated lands immediately east of the site, the WEDGs states;

> *"There would generally be no height restrictions on mountain moorlands as the scale of landscape is so great. However, shorter turbines may be more appropriate where they are located on small peaks and outcrops in order to maintain an appropriate scale. Profile, whether even or uneven, is dependent on topography: the more rugged and undulating (e.g., knolls and crags) the more uneven it will be. The profile of the wind energy development should not necessarily run in parallel to that of the topography."*

Overall, the Proposed Development is well assimilated in this robust, working elevated landscape context that is already heavily influenced by working and productive land uses such as areas of pastoral farmland transitioning into extensive areas of commercial conifer forestry plantations. The broad nature of the ridges also further assimilates the scale and extent of the development in this landscape context. Furthermore, it is also important to note that the draft WEDGs seek to accommodate taller turbines in populated rural areas without a sense of spatial overbearing by using a height-based buffer from residential properties equivalent to 4 X the turbine tip height. In the case of the proposed turbines, this requires a minimum 720m setback from the nearest surrounding residential receptors. The proposed turbine array exceeds this, with the nearest turbines situated some 725m from the nearest inhabited residential receptor.

There has been an industry-wide move towards the use of taller turbines over the past decade, and the proposed turbines are consistent with current trends in terms of permitted and proposed wind energy developments in similar landscapes. There is also a landscape and visual trade-off in terms of turbine density and scale to achieve an equivalent output. This is clearly evident in the 2007 Fáilte Ireland independent study (updated in 2012) looking at visitor attitudes to wind farm developments in the Republic of Ireland. The report found that "if both (wind farms) produced the same amount of electricity, tourists also preferred wind farms containing a small group of large turbines (55%) to a large group of smaller turbines (18%)".

With regard to the 180m tip height turbine size, many of the observations note that these will be the "largest turbines throughout Ireland and Europe", which is not the case. There are several wind farm developments within Ireland that have turbines constructed up to a tip height of 180m, one of the more recent of which is Drumlins Park Wind Farm. It is also important to note that Sheskin South Wind Farm comprising 200m tip height turbines is consented, whilst numerous other wind farm applications for developments with 200m and 220m turbines are proposed throughout the country.

3.2 Theme 2: The perceived visual impact on the "unspoilt" and "unique" surroundings of the site and the impacts on surrounding designated Scenic Routes

With regard to the landscape context of the site, it is a working transitional setting that is heavily influenced by extensive areas of commercial conifer forestry and pastoral farmland. The central study area comprises varied terrain and is heavily influenced by the Broadford Hills, which are one of the principal landscape features within the study area. The Broadford Hills are not highly distinctive, albeit they provide some elevated views across the central and wider study area and beyond. With regard to landscape designations, the transitional nature of the central study area is highlighted by the contrasting landscape types and landscape character areas located within the central study area, which include the 'Slieve Bernagh Uplands', the 'East Clare Loughlands' and 'Sixmilebridge Farmland'. The modified nature of the central study area is also reinforced within the current Clare CDP as the southern half of the central study area is located with the more robust 'working landscapes' designations, whilst the northern half of the central study area is contained within the 'settled landscape' classification, which cloaks the majority of Clare's rural landscape.

Overall, it is considered that this is a transitional rural landscape situated to the south of the Slieve Bearnagh Mountains that is not highly rare, distinctive or unique. Some localised parts of the study area encompass susceptible landscape values relating to scenic amenity, recreation value and a sense of nature. However, overall, the predominant landscape values within the central study area relate to the subsistence of the rural economy. As a result of the reasons outlined above, the overriding landscape sensitivity within the central study area was deemed Medium, with some localised areas of higher sensitivity. As per Table 14.1 of **EIAR Chapter 14 Landscape & Visual** (hereafter referred to as **EIAR Chapter 14**), areas of a 'Medium' landscape sensitivity are considered "Areas where the landscape character exhibits some capacity and scope for development. Examples of which are landscapes, which have a designation of protection at a county level or at non-designated local level where there is evidence of local value and use."

It is important to note the use of the terms 'unspoilt' and 'pristine' throughout the various submissions relating to LVIA. These terms are inaccurate descriptions of the receiving landscape. In fact, the landscape of the study area is one that is heavily modified. Views of the agricultural landscape are generally pleasant in terms of its rolling pastoral aesthetic and 'green', settled working character. Furthermore, the network of hedgerows and vegetation that occur throughout it contributes to some sense of naturalness and, in combination with its undulating topography, generates a high degree of containment in many locations. However, whilst the agricultural context forms the primary landscape and visual experience, the local landscape of the site and its immediate landscape has a working elevated character, which is evident through the extensive areas of commercial conifer forestry plantation that cloak the surrounding rolling elevated terrain. Whilst there are elevated areas within the immediate and central study area that present with pleasant views across the rolling elevated lands, the patchwork of transitional farmland, extensive areas of conifer woodland, and anthropogenic built features such as telecommunications masts and overhead line corridors, these demonstrate longstanding human intervention in the central study area. Thus, it is considered inaccurate to describe this context as an 'unspoiled' and a 'pristine natural' setting.

Overall, views within the central study area in the direction of the site can be pleasant and impart something of a pastoral aesthetic in some areas. However, these views are not considered to be highly distinctive or unique. In general, views within the study area tend to be typical rural views dominated by a mix of pastoral lands and elevated conifer forestry plantations. Some parts of the study area afford broader distant views across the wider study area in the direction of more visually susceptible features, such as the Slieve Bearnagh Uplands and the Shannon River corridor; however, these are predominately viewed in the opposite direction to the Proposed Development. Indeed, the robust and modified nature of this landscape context is reinforced by the sites and surrounding landscapes classification as a 'Strategic' area in relation to wind energy development in the current CDP. The CDP also states that in relation to the Sliabh Bernagh Uplands LCA, which encompasses the site, that this LCA has a 'medium-low' sensitivity to wind farm developments and has the capacity to accommodate 'large' scale wind farm development.

With regard to the surrounding designated scenic amenity, all of the scenic routes (SR) and views in Clare and in both Limerick and Tipperary that fall inside the ZTV pattern (see Figure 14.6 of **EIAR Chapter 14**) were investigated during fieldwork to determine

whether actual views of the proposed wind farm might be afforded. Where visibility may occur, a viewpoint was selected for use in the visual impact assessment. In some instances, a single viewpoint is selected to represent a stretch of designated scenic route or a cluster of designated scenic views, particularly distant ones. As per the LVIA in **EIAR Chapter 14**, designated scenic views are represented by five viewshed reference points (viewpoints VP1, VP3, VP4, VP22, VP23). The nearest of these include a scenic route comprising two sections that traverses the R466 regional road to the north and south of the settlement of Broadford and two scenic routes that travel elevated terrain in the southwest quadrant of the central study area. Whilst there will be some brief but clear views of the turbines from the northern section of this route, the southern half of this route will be heavily screened by surrounding dense vegetation.

Two other scenic route designations also run northeast by southwest along elevated terrain northeast of the settlement of Cratloe. Due to the elevated nature of the terrain here, broad intermittent views will be afforded across the landscape, albeit the main aspect of amenity relates to views to the northwest and west. In contrast, the Proposed Development is viewed on elevated lands to the northeast. Furthermore, the more southern scenic route only has the potential for intermittent views of the Proposed Development, as large sections of its route are located outside of ZTV pattern, whilst the road corridor is also heavily contained by surrounding conifer forest plantations. Overall, the significance of effect at scenic route designations ranged between Moderate-slight to Slight-imperceptible. Thus, it is not considered that the Proposed Development will result in significant visual impacts in respect of scenic designations within the study area.

Overall, it is important to note that the Proposed Development will result in some detraction in local and designated scenic amenity within the central and wider study area. Notwithstanding, the submitted **EIAR Chapter 14** concluded that the Proposed Development will not result in significant visual effects in this already modified rural setting.

3.3 Theme 3: Perceived effect on the scenic and recreational value of the 12 O'clock Hills Trails and impacts on surrounding amenity and heritage receptors

The 12 O'clock Hills trails and the East Clare Way both are located immediately adjacent to the site and will have clear views of the turbines from a near distance where the proposed turbines will present with a dominant visual presence. In terms of the immediate site context, a section of the East Clare Way passes directly through the site and will afford clear views of the turbines, which will present with a dominant visual presence. Nonetheless, this elevated landscape context is cloaked in extensive areas of active conifer forestry and is not considered highly rare or unique. There will be some broad distant views afforded from this linear walking trail where the Proposed Development will be clearly and prominently visible and has the potential to detract from the scenic amenity afforded here. Notwithstanding, the turbines are slender structures and will not block or unduly obstruct panoramic views afforded from the ridge top summit and allow for a strong degree of visual permeability through the proposed turbine array towards the surrounding settled countryside.

In similar circumstances to the East Clare Way, some of the trails that form part of the 12 O'clock Hills looped walking trails will also pass immediately adjacent to the proposed

turbines where they have the potential to afford prominent views of the turbines at a near distance. Nonetheless, it is important to note that a large extent of the looped trails within the 12 O'clock Hills trail network are contained on the north-facing slopes of the Broadford Hill, which have a limited potential for clear theoretic visibility of the full extent of the development as highlighted by the ZTV map (see Figure 14.6 of **EIAR Chapter 14** and

Figure 3.1 below). Indeed, many sections of this trails on the north-facing lands of the Broadford Hills are also contained in dense areas of commercial conifer forestry.

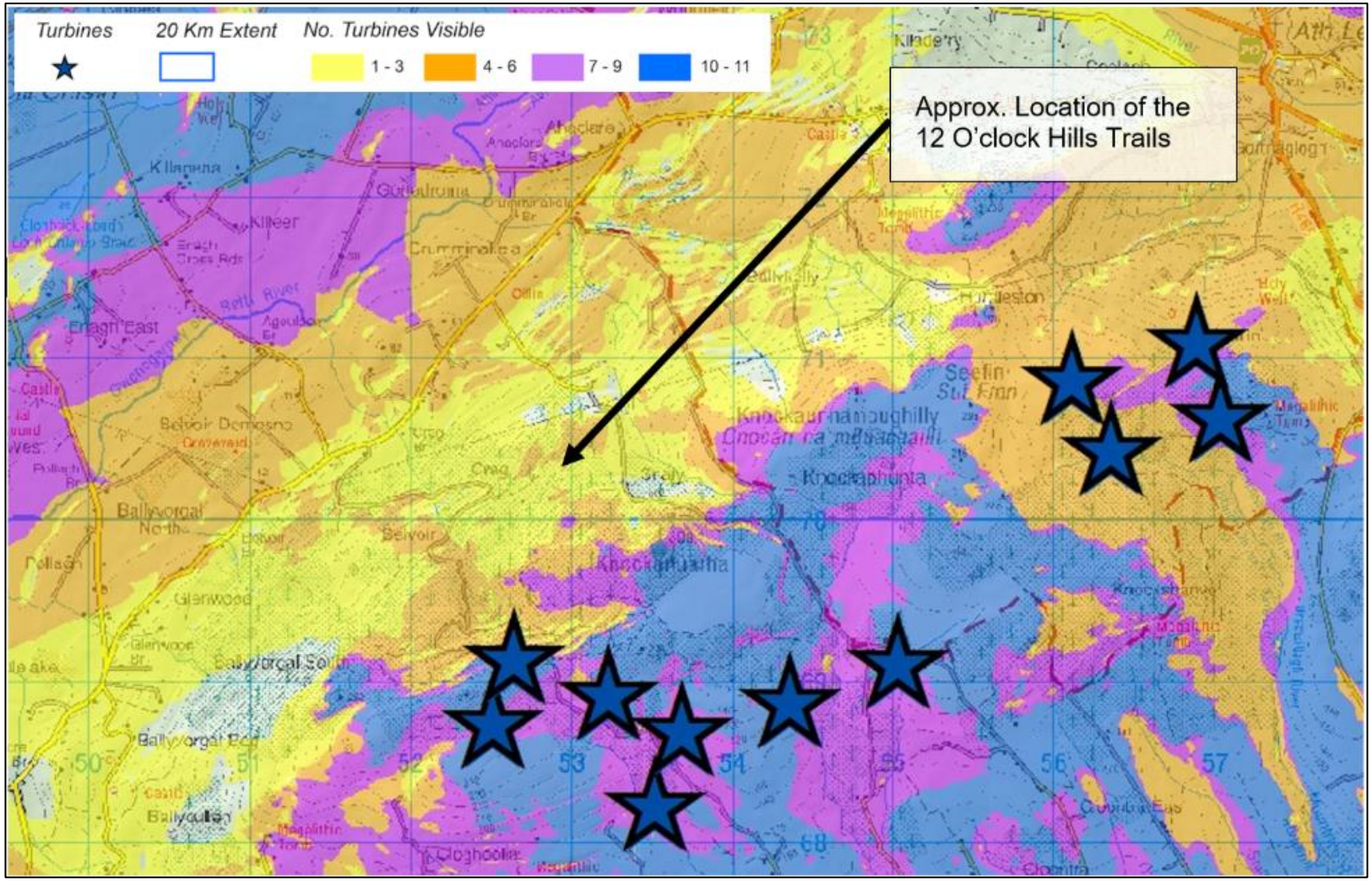

Figure 3.1: Excerpt from Figure 14.6 of the submitted EIAR Chapter 14 showing potential turbine visibility to the north of the site in the surrounds of the 12 O'clock Hills complex

Nonetheless, and in similar circumstances to sections of the East Clare Way, there will be prominent views of the turbines from some of the most elevated sections of these trails. One of the highest points of these trails occurs along the summit of Knockanaurha Hill. This hilltop summit rises to a height of some 309m and affords panoramic views of the surrounding settled rural landscape. It is important to note that one of the main aspects of scenic amenity from this hilltop summit is the sweeping broad view of the surrounding country side to the north and west. The 12 O'clock Hills website[1] further reinforces this principal aspect of amenity where it states "*from these Twelve O'Clock Hills much of County Clare is on view including West Clare, the Burren and the Shannon Estuary while locally Kilkishen village, Cutlaun Lake and Steele's Turret are prominent. With a little effort, the town of Ennis and many of the villages of East Clare can be seen".* All of the aforementioned areas are contained to the west and north of Knockanaurha Hill. Whilst similar broad views are afforded to the south, they are partially contained by Woodcock Hill and its surrounding elevated lands. The proposed turbines will be clearly visible to the south from this hilltop summit, with the nearest visible turbine offset some c. 800m from this elevated viewing point.

With regard to waymarked walking trails and local walking and hiking trails, there are numerous precedents throughout the country where trails pass immediately adjacent to existing wind farm developments. With reference to the permitted Boggeragh II Wind Farm, which is located in an almost identical elevated context that is heavily influenced by existing forestry and is intersected by a waymarked walking trail in County Cork, the Inspector's Report stated;

> *"The proposed development will involve the introduction of large structures into the landscape at a relatively near distance along part of the route. However, in the context of the assessment in relation to visual amenity and landscape above, I do not consider that the impact of the proposed development would significantly affect the recreational value of the walking route. I have no objection to the proposed development in this respect".*

It is important to note that the inspector acknowledged that the Proposed Development would not "*significantly affect the recreation value of the walking route*" which passed immediately south of the nearest turbines.

Up to ten representative viewpoints were selected to represent tourism, amenity and heritage features throughout the central and wider study area. Some of the more notable of these relate to heritage features that are popular tourist attractions for domestic and international visitors and include Bunratty Castle in County Clare and King John's Castle along the River Shannon in Limerick City. A representative view from an adjacent river overbridge of Bunratty Castle depicted the potential visibility of the Proposed Development from this sensitive receptor (refer to VP25 in **EIAR Chapter 14**). Whilst there will be views of the turbines from here, they present as distant background features and will have little notable effect on the visual setting of the Bunratty Castle and views afforded from it. Indeed, Bunratty Castle and the settlement of Bunratty are immediately adjacent to a busy major route corridor, which has the most notable influence on the surrounding landscape. Thus, the significance of impact was deemed 'Slight-imperceptible'. In similar circumstances, King John's Castle, located in the centre of Limerick City on the banks of the Shannon, is some c. 11km south of the site. Whilst the

[1] https://12oclockhills.com/

wireframe in the photomontage booklet in **EIAR Chapter 14** (Refer to VP26) identifies the potential for several turbine blade tips to be seen from this considerable distance, they are unlikely to be noticeable from here and will have no notable impact on the visual amenity of this busy urban context. Thus, the Proposed Development will have limited visibility and influence on Limerick City and the significance of visual impact is deemed Imperceptible.

Overall, whilst there will be some notable visual effects along the nearest linear trails to the Proposed Development, the turbines will not block or heavily obstruct visibility of the wider landscape from this near distance. Furthermore, the turbines will have little influence on some of the more notable heritage receptors located within the wider landscape, which are also influenced by an array of other, nearer, anthropogenic built features. Thus, as stated in **EIAR Chapter 14**, it is not considered that the Proposed Development will generate significant visual effects at tourism, heritage and amenity receptors within the study area.

3.4 Theme 4: Accuracy of photomontages selection of representative viewpoints

In terms of the accuracy, Macro Works produce photomontages in line with the current Nature Scot Guidelines and guidance set by the British Landscape Institute 2011 – Advice Note 01/11. Viewpoints are selected and high-quality photography in RAW format is captured using a digital Single-Lens Reflex (SLR) camera with a fixed 50mm lens on a Monfrotto panoramic head and leveller. Viewpoint locations are then spatially captured using a survey grade Global Positioning System (GPS) unit to within 10cm of accuracy. High resolution 360-degree panoramas are generated from the captured photography. The scheme is then modelled using a Digital Terrain Model (created with a combination of LiDAR and OS Terrain Data) and real world reference points. It is rendered in Autodesk 3DS Max 2023 with identical image characteristics to that of the camera used for the baseline photography allowing the render and the photography to be merged with a high degree of accuracy.

In terms of the selection of the viewpoint locations for assessment, this is guided by the GLVIA3 (Guidelines for Landscape and Visual Impact Assessment). The viewpoint selection is undertaken utilising the ZTV (Zone of Theoretical Visibility) mapping, which provides the basis for selection of key viewpoints from which to study the visual and landscape impact of the Proposed Development in detail. It is not practical to include every single location that provides a view of the Proposed Development as this would result in an unwieldy report and make it difficult to draw out the key impacts arising. Instead, the assessors endeavoured to select a variety of location types that would provide views of the Proposed Development from different distances, different angles and different contexts. The locations selected are significant because they comprise, for example, centres of population and important communication routes whether due to traffic volume or their scenic value. An initial broad set of potential views was generated from a desk study using the ZTV map. Each potential VP is colour coded to identify which of the following receptor types it represents;

- Key Views - from features of international or national importance;
- Amenity Views - from important heritage or amenity locations;

- Designated Scenic Routes and Views;
- Local Community Views;
- Centres of Population;
- and Major Routes.

It is important to note that some VPs may be applicable to several receptor categories, in which case, they will be assessed under the group that best reflects that location's particular sensitivities. Whilst every effort is made to select viewpoints with the clearest and most unimpeded view of the Proposed Development, in some instances, only a partial view of the Proposed Development will be visible from the nearest publicly accessible location that was selected to represent the visual receptor. In instances where the Proposed Development is heavily screened from a specific receptor, a photomontage has been included to highlight the degree of intervening screening afforded between the visual receptor and the proposed turbines. In circumstances where a branch or cluster of vegetation partially screens a turbine or section of the development, the wireframe view is utilised to understand the potential visual impacts and perceived scale of the development from that receptor.

Finally, it is important to note that Macro Works always attempts to use the most open views relative to the receptor being represented, whether these are views from a town or a designated scenic route. It serves no purpose to assess visual impacts from a location, which can be readily proven not to be representative of worst-case visual exposure from a particular receptor, as this only undermines the assessment. In terms of the timing of baseline photography, this was captured during the summer months of 2023, whilst the application was submitted in Winter 2023.

3.5 Theme 5: Impact "flashing turbine lights" on the night sky

Visual amenity is at its lowest during dark periods, as views across the landscape are inhibited by the low levels of visibility. Thus, the proposed aviation warning lighting will have a minimal effect on the visual amenity afforded in this landscape context, as the lighting will only ever be visible during periods of darkness. It is also important to note that the proposed lighting is located on top of the proposed turbine nacelle, as its principal use is to identify obstacles in the sky for aviation-based receptors.

Thus, the lighting included will not cast light down towards the ground, which diminishes the potential for any notable effects to occur at ground-based receptors. Whilst the flashing lights have the potential to be discerned from ground-based receptors, the study area and local surrounds of the site are not located in a designated dark sky area. It is also worth noting that the central study area is influenced by light spill emanating from existing light sources in residential areas (including from the array of settlements within the study area such as Broadford, Sixmilebridge and Limerick City in the wider study area), along the surrounding local, regional and national road network, from surrounding telecommunications masts, and from aircrafts taking off and landing at Shannon Airport.

3.6 Theme 6: Perceived cumulative impact of the Proposed Development

Section 14.10 of **EIAR Chapter 14** assesses the potential cumulative impact of the Proposed Development and identifies 2 single turbine developments and 1 consented wind farm, 1 proposed wind farm (under appeal – subsequently permitted since the proposed Oatfield wind farm application was submitted), and 3 wind farms at pre-planning stage contained within the study area. For the purposes of clarity, the cumulative assessment was divided into the 'Existing Baseline Scenario', which accounts for all existing and consented development within the study area, and the 'Potential Future Cumulative Scenario', which accounts for all existing, consented, proposed and developments at the pre-planning stage.

As per **EIAR Chapter 14**, the most notable cumulative effects have the potential to occur in the 'Potential Future Cumulative' scenario, with the principal cumulative effect associated with the proposed Knockshanvo Wind Farm, which is situated immediately adjacent to the proposed Oatfield turbines. Other developments within the central study area includes Ballycar Wind Farm (proposed) located some 3km south of the Proposed Development and Carrownagowan Wind Farm located 4km northeast of the Proposed Development. If permitted, the combination of Knockshanvo, Ballycar and Carrownagowan Wind Farms will result in an additional 40 turbines within and along the periphery of the study area, generating a marked increase in the intensity of wind energy development in this landscape context.

With regard to the Knockshanvo development (in pre-planning), the proposed Oatfield Wind Farm and Knockshanvo Wind Farm will likely be perceived as one large wind energy development due to their locations being adjacent to one another. However, due to the dispersed layout, which presents as three distinct clusters, the overall scale and intensity of the combined developments are somewhat diminished. Indeed, the broad plateaux of hills and ridges within the Broadford Hills can well accommodate the combined developments without undue scale conflict. Nevertheless, the combination of both Proposed Developments will result in wind farm development becoming one of the more characteristic built features in this elevated landscape context. Whilst the combined views of the Oatfield and Knockshanvo turbines will generate some notable visual effects within the central study area and in the immediate surrounds of the turbines, the contained nature of the central study area, especially the lands directly south of the site, will often partially screen views of both the proposed Oatfield and Knockshanvo turbines. In fact, once existing intervening screening is accounted for, aside from the summit of the underlying hills and ridges, there will be very limited locations within the central study area, where clear views of all the turbines in both developments will be visible from a near distance.

With regard to other cumulative wind energy developments within the study area, these will be typically viewed as distinctly separate developments to the proposed Oatfield wind farm but will further increase the intensity of wind farm development within this landscape context. There is potential for some intervisibility with the proposed Ballycar Wind Farm development, especially from receptors located within the valley between the Proposed Development and Woodcock Hill. However, the high degree of dense intervening vegetation will heavily dilute the potential for clear views of the entire arrays in both developments. In similar circumstances to Ballycar Wind Farm, there will still be some

clear opportunities to afford combined views of the Proposed Developments and the proposed Fahy Beg and Lackareagh developments, both of which are situated some 5.5km to the east of the site and are afforded a clear degree of separation from the Proposed Developments. They will contribute to a notable increase in the intensity of wind farm development in this aspect of the study area, albeit they will present as distinctly separate developments to the proposed Oatfield turbines.

Overall, and as per **EIAR Chapter 14**, it is considered that there will be a notable sense of wind farm proliferation within the central study area and in the wider eastern half of the study area. Wind farm development will become one of the more prominent built developments within the surrounding landscape, albeit these effects are slightly diminished as a result of the siting of the Knockshanvo development immediately adjacent to the Proposed Development. This results in the combined development being perceived as one larger consolidated array of turbines. Furthermore, due to the similar scale of the turbines in both developments, they will not generate any notable negative effects relating to scale conflict or and strong sense of visual tension between the two turbine arrays.

In conclusion, should all of the Proposed Developments within the study area be permitted and constructed, it is considered that the Oatfield Proposed Development will contribute to a cumulative effect in the order of High-medium in the potential future baseline scenario. It is not considered that the Proposed Development will generate significant cumulative landscape and visual effects.

Figure 3.2 below shows the potential for visibility (based on a bare ground scenario) from the Sunyata Buddhist Retreat.

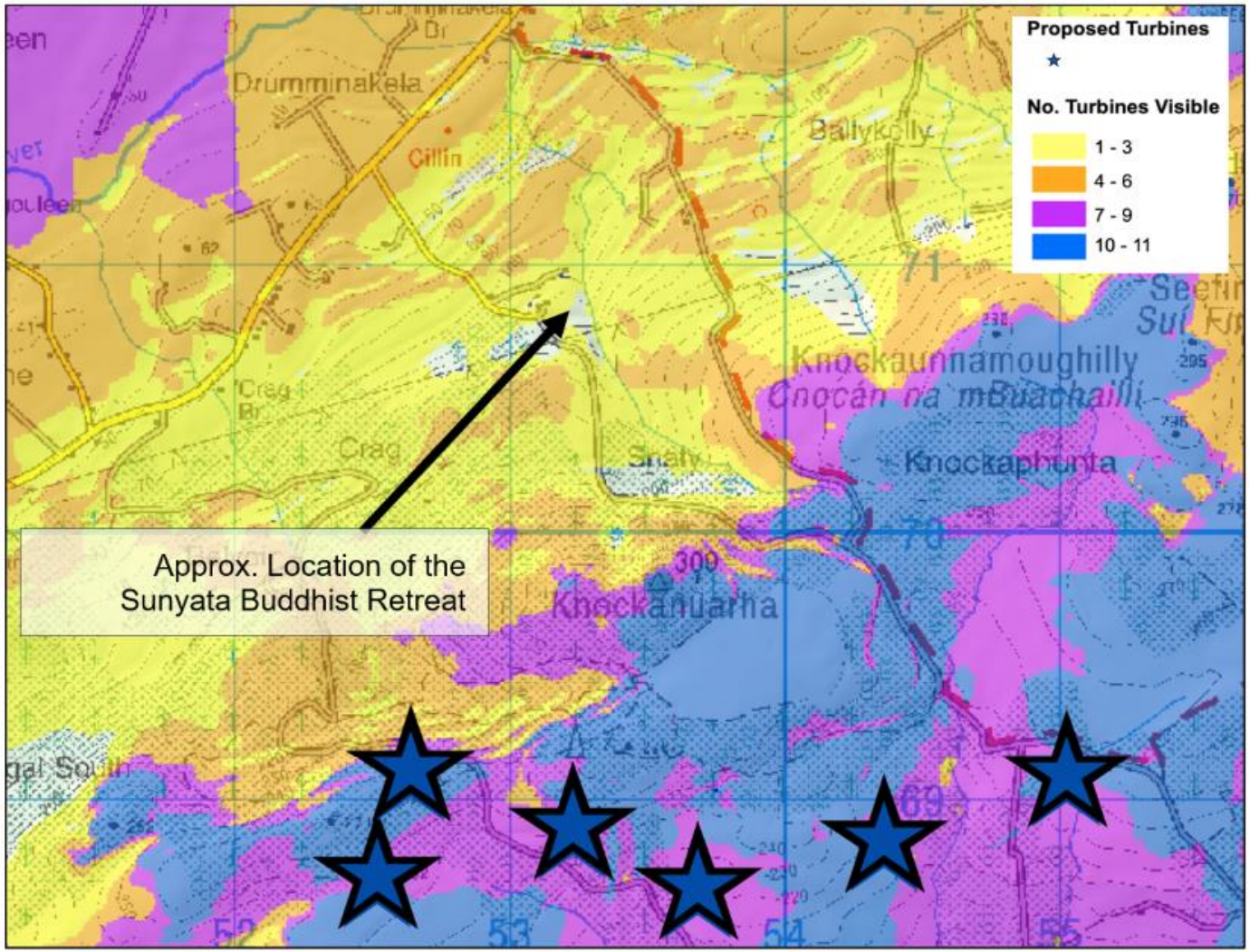

Figure 3.2: Zone of theoretic visibility map (based on a bare ground scenario) from the Sunyata Buddhist Retreat

3.7 Theme 7: Specific responses

Responses to several more specific items highlighted throughout the submissions received are included below.

3.7.1 *Scenic beauty:*

"The proposed windfarm is not sited in a way that minimizes the visual impact on the scenic landscape of the Broadford Hills and Slieve Bearnagh Mountains, including protected areas, heritage sites, and tourist destinations."

3.7.1.1 Response

Both themes two and three (see Section 3.2 and 3.3, respectively) provide a response on the impact of the Proposed Development at surrounding scenic designations and at various receptors, including tourism, amenity and heritage receptors within the study area. In fact, the submitted LVIA (refer to **EIAR Chapter 14**) included representative VPs from 26 locations within the study area, which represented a wide range of receptor types, view angles and distances from the site and is considered a robust assessment of receptors within the study area. Broadford Hills is reflected in the current Clare CDP, which designates a large part of the Broadford Hills as a 'Strategic Area' in relation to wind farm development.

With regard to the siting of the Proposed Development, the layout of the proposed array comprises two distinct turbine clusters. This approach to clustering the turbines entirely diminishes the overall scale and extent of the development at surrounding receptors. This is most evident at VP7, which is from the locally elevated setting of St. Peter's Church at Broadford, where only four of the eleven proposed turbines will be visible. Moreover, even from some of the nearest visual receptors, the clustered and staggered nature of the turbine layout also reflects the guidance in the current WEDGs in relation to the 'spatial extent' for development within 'Transitional Marginal Landscapes'. In this regard, the WEDGs states that "*wind energy development with irregular spacing and random layout - is more appropriate given the relative undulation of the setting*."

With regard to the height of the turbines, which is discussed in detail in theme one above (see Section 3.1), the draft 2019 WEDGs states, "*In small-scaled enclosed areas, short turbines are preferred in order to avoid their spatial dominance and to ensure visual balance. However, where the upper ground is relatively open and visually extensive, taller turbines may be more appropriate*". As noted throughout the submitted **EIAR Chapter 14**, the Proposed Development is contained across a broad elevated rolling ridge, and thus, larger turbines are considered appropriate as they respond to the scale of the underlying landform.

3.7.2 *Landscape Assessment:*

"The landscape assessments completed by the applicant to identify sensitive areas and potential visual impacts have been completely inadequate."

3.7.2.1 Response

Section 14.8.2.1 of the submitted **EIAR Chapter 14** gives a robust assessment of the sensitivity of the receiving landscape and is divided into both the central study area (<5km from the turbines) and the wider study area (out to 20km from the turbines).

This assessment identified that whilst a degree of designated scenic amenity was present within the surrounding local landscape, the central study area presents with a notable utilitarian character influenced by the extensive areas of commercial conifer forestry, the numerous major routes and the telecommunication infrastructure located along some of the elevated lands. It is considered that this is a transitional rural landscape situated to the south of the Slieve Bearnagh Mountains that is not highly rare or distinctive. Whilst some localised areas present with susceptible landscape values relating to scenic amenity, recreation and the naturalistic, overall, the predominant landscape values relate to the subsistence of the rural economy, and thus, the sensitivity of the receiving landscape within the central study area was deemed Medium. In relation to the wider study area, the southern and western half are considered to be consistent with a medium-low landscape sensitivity as they are influenced by the urban settlement of Limerick City, Shannon and Ennis. Nevertheless, the northern, especially the north-eastern aspects of the study area, comprise some distinctive landscape features and landscape areas and are classified with a localised High-medium landscape sensitivity.

In terms of visual effects, up to 26 representative views were selected to assess visual impacts within the central and wider study area. The assessment of visual effects follows current best practice and uses methodologies outlined in the Landscape Institute and the Institute of Environmental Management and Assessment (IEMA) publication entitled Guidelines for Landscape and Visual Impact Assessment – Third Addition (2013). As identified in the submitted LVIA, the significance of visual effect is generated by combining the sensitivity of the visual receptor with the magnitude of visual effect. With regard to visual effects, the submitted LVIA concluded that this eleven-turbine development is appropriately sited in this elevated landscape context that is heavily influenced by existing conifer forest plantations, overhead electrical infrastructure development and more typical rural land uses. The scale of the turbines is well assimilated in this landscape context, and the turbines do not present with any strong sense of overbearing at even the nearest local receptors. Thus, it is not considered that the Proposed Development will result in significant visual impacts.

3.7.3 Turbine siting:

"Turbines should be strategically placed to minimize visual intrusion. The applicant has not adequately dealt with factors such as topography, distance from residential areas, and existing structures. These points have not been adequately considered to optimize turbine placement."

3.7.3.1 Response

As noted in **EIAR Chapter 14**, the siting and design of the Proposed Development was undertaken using the guidance on wind farm siting and design criteria in the Wind Energy Development Guidelines (2006/2019 Draft revision). The Proposed Development site and surrounding landscape is most consistent with the landscape type 'Transitional Marginal Landscapes' whilst some parts of the central study area also encompass characteristics from the 'Mountain Moorland' landscape type in addition to some upland parts of the wider northern half of the study area, whilst the low rolling lands that occupy large parts of the central study and wider study area are most consistent with the 'Hilly and Flat Farmland' landscape type.

With regard to the siting and design recommendations for this landscape type, it is considered that the Proposed Development's siting and design responds well and is generally consistent with the guidance notes for the 'Transitional Marginal Landscapes' landscape type. In terms of the locational guidance, the Proposed Development's design also responds well, as the proposed turbines are principally located along some of the most elevated hills and ridges within central study area and are well offset from areas of lower ground. In addition, the irregular spacing of the turbines responds well to the spatial guidance, which states *"irregular spacing is likely to be most appropriate",* whilst the spatial extent of the development clustered and irregular layout of the development is consistent with the guidance that states "Wind energy development with irregular spacing and random layout - is more appropriate given the relative undulation of the setting". In terms of the height of the Proposed Development, the turbine heights proposed (up to 180m) are considered appropriate as the guidance states that "where the upper ground is relatively open and visually extensive, taller turbines may be more appropriate".

It is also imperative to note that the Proposed Development is fully compliant with the draft WEDGs 'siting in relation to individual properties'. The nearest inhabited residential dwelling to any of the proposed turbines is approximately 725m which exceeds and fully complies with the setback distance outlined in both the current 2006 Guidelines and the Draft Revised Guidelines (2019), which in this instance is 720m.

3.7.4 Mitigation measures:

"The applicant has not introduced any mitigation measures such as landscaping, screening turbines to blend with the surroundings."

3.7.4.1 Response

Landscape and visual mitigation measures are embedded within the design and are outlined in Section 14.7.2.1 of **EIAR Chapter 14**. In this instance, the main two forms of landscape and visual mitigation employed were mitigation by avoidance and design and buffering from residential receptors.

The principal mitigation measure employed in this instance is the siting of the Proposed Development with an appropriate 'Strategic Area' zoning in relation to wind farm development in the current Clare County Development Plan. The 'Strategic Area' classification clearly highlights Clare County Council general acceptance (subject to Environmental Assessments) that this landscape context can well accommodate wind energy development and is a robust part of County Clare that is not considered highly susceptible to development. While the Proposed Development has been designed in line

with the current WEDGs guidance, some of the general mitigation measures that will be implemented to make the development appear less visually dramatic on a localised level include;

- The colour will be industry standard off-white/light grey semi-matt non-reflective finish;
- Electricity lines between individual turbines and the substation, and the grid connection infrastructure, will be placed underground;
- Special care will be taken to preserve any features, insofar as possible, which contribute to the landscape character of the study area; and
- Counter rotation of blade sets will be avoided.
- The removal of areas of existing vegetation will be avoided in so far as possible.

It is not common practice to try to screen turbines with areas of planting. Proposing planting within and surrounding the proposed array will have little to no effect on the perceived scale of the Proposed Development from the nearest surrounding receptors. Instead, compliance with the current visual amenity offsets outlined in the WEDGs (2019 revision) is considered a more effective best practice. For the Proposed Development, the minimum distance of any turbine from the nearest residential receptor is 725m, which is in excess of the draft Wind Energy Development Guidelines (2019) minimum set back of 500m and greater than the setback distance of 4 times the tip height of the proposed turbines. In this instance the setback distance for visual amenity purposes would be 720m from residential receptors on the basis of the 180m high turbines (this represents the greatest potential setback distance with regard to all potential turbines ranges).

Variation in residential buffer distances within the nearest kilometre has a much more noticeable effect on perceived turbine scale than when it occurs in the context of more distant views. This is due to the law of perspective – that doubling the distance to an object halves its perceived height. The reduction factor is even more pronounced when considered in the context of the 'swept area' of a turbine's blades and not just in its tip height. This exponential 'scale in relation to distance' scenario is illustrated below.

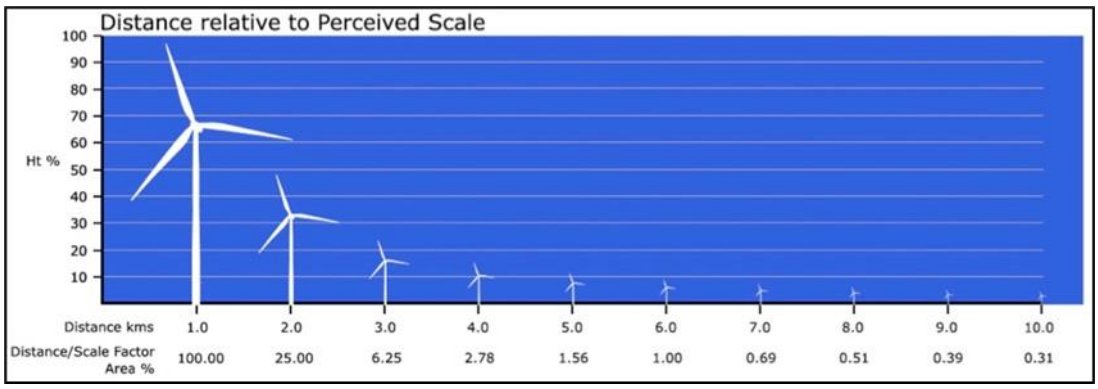

Figure 3.3: Turbine 'scale in relation to distance' relationship

3.7.5 The 12 O' Clock Hills:

Several submissions outline concerns in relation to the impact on the 12 O'clock Hills trails. They identify the scale of the turbines, their proximity to the hiking trails and the potential visual impact generated by the proposed turbines as key concerns. Each of these concerns is dealt with in detail in the common themes outlined above. It is important to note that this response states that the proposed turbines "standing at nearly 200 meters" will become the largest wind turbines ever erected on the island of Ireland. This is an inaccurate statement as the proposed turbines will not be 200m and are proposed to be 180m. Furthermore, the precedent already exists for turbines of this scale, with the turbines in the existing Drumlins Park Wind Farm rising to a height of 180m. It is also important to note that Sheskin South Wind Farm comprising 200m tip height turbines is also consented, whilst numerous other wind farm applications for developments with 200m and 220m turbines are proposed throughout the country.

3.7.6 Sunyata Buddhist Retreat:

With regard to the Sunyata Buddhist Retreat, this is located on private lands and would not typically be identified as a publicly accessible receptor for LVIA. As per the Notes and Clarifications on aspects of the 3rd Edition GLVIA, it states, *"A LVIA should consider views from local communities focusing on the way that a community currently experiences views from public locations such as streets and open spaces and how those will change."* It is also important that despite the near distance of the Sunyata Buddhist Retreat to the Proposed Development (c. 1.7km north of the nearest turbine), it has a very limited potential for clear visibility of the Proposed Development due to the intervening terrain located to its south. Indeed, and as per the bare-ground ZTV (

Figure 3.2), the landscape in the immediate surrounds of the Sunyata Buddhist Retreat has the theoretical potential for between 1-3 turbines, and in some localised areas, there is no potential for turbine visibility at all. A further analysis using wireframe views from this location identified that there is very limited potential for clear visibility of the turbines from this landscape context (refer to Appendix 1). In fact, once screening in the form of existing surrounding vegetation is accounted for, the proposed turbines will largely be screened from this viewing context, and the residual visual effect is deemed no greater than Slight-imperceptible.

3.7.7 Other items:

3.7.7.1 Photomontage Issues:

"Photomontages have been set up in a misleading manner. Viewpoints are selected in which bushes block the most overbearing of visual impacts, leading to what seems a lesser impact than is the case. This is intentionally cunning, and not in the spirit of a fair planning process."

In terms of the accuracy, Macro Works produce their photomontage in line with the current Nature Scot Guidelines and guidance set by the British Landscape Institute 2011 –Advice Note 01/11. The clear methodology for this is highlighted within the submitted Photomontage Booklets as part of the planning application for the Proposed Development. In some instances, the surrounding vegetation screening will heavily screen the development from specific receptors. As an example, Viewpoint VP18 was

selected to represent a local heritage feature (St Vincent de Paul's Church), which is heavily contained by surrounding vegetation. Thus, the screening in the form of surrounding vegetation is representative of actual potential visibility of the Proposed Development from this static receptor.

A full range of video/photomontages was received amongst the submissions, although it must be noted that these have not been generated as per the current guidance and best practices. In fact, many of the submitted images have been heavily cropped, which increases the perceived scale of the development and gives a false sense of how the development will actually be experienced from these receptors. It is also important to note that the video/photomontage images included both the proposed Oatfield turbines and all other permitted and in-planning developments without any clarification as to which turbines are within each scheme. Indeed, this is slightly misleading as it is presented that these turbines are all included within the Oatfield Proposed Development. It is also important to note that the turbines are backlit and present with a dark grey colour, which further increases their visual prominence in these views. As noted in our **EIAR Chapter 14**, the proposed turbines will be finished in an off-white colour, where they will often be viewed with a low degree of visual contrast against the sky.

Macro Works have generated several additional views which have been created using the current guidelines (see Appendix 1). These views clearly differentiate what is proposed as part of Oatfield Wind Farm (blue colour turbines) and the other cumulative (proposed and permitted) developments (yellow colour turbines). These additional views reinforce the judgements made throughout the submitted **EIAR Chapter 14** and that the Proposed Development will not generate significant visual effects.

It is important to note that Macro Works undertook two field trips to the study area throughout the Spring and Summer of 2023. Macro Works LVIA staff are unlike many other LVIA consultants within the country as they undertake both fieldwork investigations and capture the photography for the photomontages. Macro Works and its staff endeavour to undertake robust fieldwork investigations to understand the local landscape character and visit a comprehensive set of landscape and visual receptors within the study area.

Whilst it is noted that there were minor errata in the referencing on Table 14.6 of the submitted **EIAR Chapter 14**, it is important to note that all scenic routes within the study area have been assessed as part of the LVIA. Macro Works have a fully digitised data set of all scenic routes within County Clare, all of which were visited and driven during fieldwork investigations. Whilst the reference of some of these is incorrect in Table 14.6, each of these designations where there was potential for theoretic visibility (refer to Figure 3.4) was assessed for actual turbine visibility during fieldwork investigations. All scenic routes with potential visibility of the Proposed Development were included as viewpoints for assessment as highlighted on Figure 3.4 below. In instances, where scenic routes are heavily screened from the Proposed Development by surrounding terrain and vegetation, a view was selected from the clearest section of the route, or the nearest representative location to it.

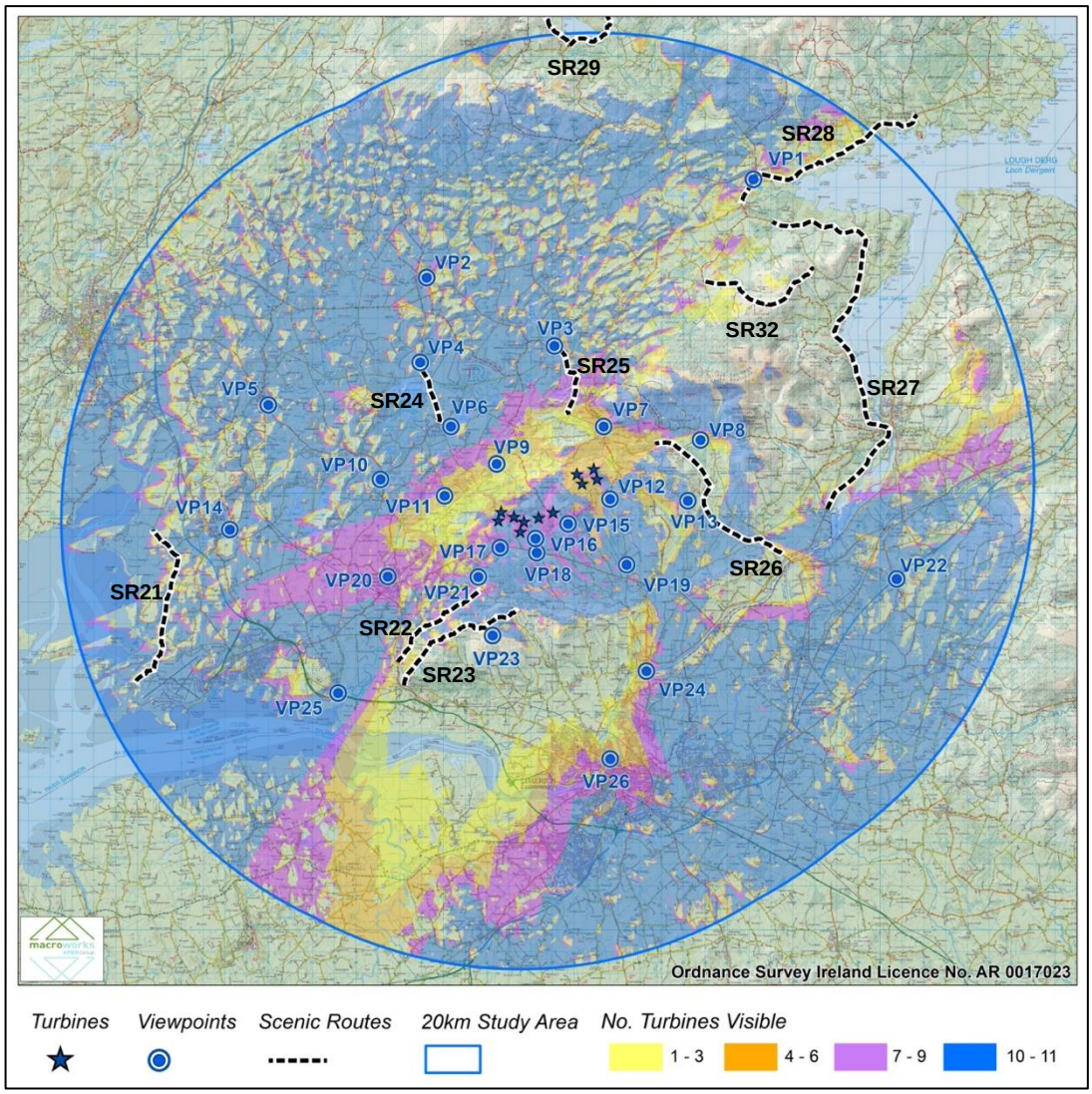

Figure 3.4: Scenic routes in County Clare in relation to the Proposed Development and selected viewpoints overlaid with the zone of theoretic visibility pattern

As noted in Section 14.8.3.6 of **EIAR Chapter 14**, the residual significance of visual effect at viewpoints representing scenic designations within the study area (VP1, VP3, VP4, VP22, VP23) ranged between Moderate-slight and Slight-imperceptible. Thus, it is not considered that the Proposed Development will result in significant visual impacts in respect of scenic designations within the Study Area.