

## 11 LANDSCAPE AND VISUAL AMENITY

### 11.1 INTRODUCTION

#### 11.1.1 Background and Objectives

This chapter of the EIAR assesses the impacts of the Development on the landscape and visual amenity of the receiving environment. Although closely linked, landscape and visual impacts are assessed separately. Where negative effects are predicted, the chapter identifies appropriate mitigation strategies therein. The assessment considers the potential effects during the following phases of the Development:

- Construction of the Development
- Operation of the Development
- Decommissioning of the Development (final phase)

The Development refers to all elements of the application for the construction, operation and decommissioning of the Dyrick Hill Wind Farm (**Chapter 2: Development Description**).

Common acronyms used throughout this EIAR can be found in **Appendix 1.4**.

This chapter of the EIAR is supported by a portfolio of photomontages (**Figures 11.1 to 11.2**) provided as a separate booklet and the following Appendix document provided in **Volume IV** of this EIAR:

- **Appendix 11.1:** Visual Impact Assessments at VPs

**Landscape Impact Assessment (LIA)** relates to changes in the physical landscape brought about by the Development, which may alter its character, and how this is experienced. This requires a detailed analysis of the individual elements and characteristics of a landscape that go together to make up the overall landscape character of that area. By understanding the aspects that contribute to landscape character, it is possible to make judgements in relation to its quality (integrity) and to identify key sensitivities. This, in turn, provides a measure of the ability of the landscape in question to accommodate the type and scale of change associated with the Development without causing unacceptable adverse changes to its character.

**Visual Impact Assessment (VIA)** relates to assessing effects on specific views and on the general visual amenity experienced by people. This deals with how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape

and/or introduction of new elements. Visual impacts may occur from: visual obstruction (blocking of a view, be it full, partial or intermittent) or Visual Intrusion (interruption of a view without blocking).

**Cumulative landscape and visual impact assessment** is concerned with additional changes to the landscape or visual amenity caused by the Development in conjunction with other developments (associated or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.

### 11.1.2 Assessment Structure

In line with the revised EIA Directive and current (2022) EPA guidelines the structure of this chapter will consist of separate considerations of landscape effects and visual effects in the following order:

- Assessment of landscape value and sensitivity
- Assessment of the magnitude of landscape effects within the Study Area; (comprised of the 'Central Study Area' (within c. five km of the Site) and 'Wider Study Area' (5-20km from the Site))
- Assessment of the significance of landscape impacts
- Assessment of visual receptor sensitivity
- Assessment of visual impact magnitude at representative viewpoint locations (using photomontages)
- Assessment of visual impact significance
- Assessment of cumulative landscape and visual impacts

### 11.1.3 Statement of Authority

This Landscape and Visual Assessment (LVIA) report was prepared by Cian Doughan (BSLA, MILI) and reviewed by Richard Barker (MLA MILI) of Macro Works Ltd, a specialist LVIA company with over 20 years' of experience in the appraisal of effects from a variety of energy, infrastructure and commercial developments. Relevant experience includes LVIA work on over 140 onshore wind farm proposals throughout Ireland, including six Strategic Infrastructure Development (SID) wind farms. Macro Works and its senior staff members are affiliated with the Irish Landscape Institute.

### 11.1.4 Description of the Proposed Development

Planning permission is being sought by the Developer for the construction of 13 wind turbines, a permanent met mast, 110Kv on-site substation and all ancillary works and the construction of an underground grid connection to Dungarvan 110Kv Substation, Co. Waterford.

- Erection of 12 no. 6.0-7.2 MW wind turbines (Note\* this is the current output available for the turbine of this size. It is possible that with improvements in technology, the output may increase at the time of construction.) with an overall ground tip height of up to 185m. The candidate wind turbines will have a rotor diameter of circa 162m and a hub height of 104m.
- Construction of crane hardstand areas and turbine foundations.
- Construction of new internal site access roads and upgrade of existing site roads, to include passing bays and all associated drainage.
- Construction of a new wind farm site entrance with access onto the R671 regional road in the townlands of Lickoran.
- Improvement of existing site entrance with access onto local roads in the townlands of Broemountain.
- Improvements and temporary modifications to existing public road infrastructure to facilitate delivery of abnormal loads and turbine delivery.
- Construction of one temporary construction compound with associated temporary site offices, parking area and security fencing.
- Development of one-site borrow pit.
- Installation of one permanent meteorological mast up to a height of 110m.
- Development of a site drainage network.
- Construction of one permanent 110 kV substation.
- All associated underground electrical and communications cabling connecting the wind turbines to the wind farm substation.
- All works associated with the connection of the wind farm to the national electricity grid, which will be via 110 kV underground cable connection approximately 16.8km in length to the existing Dungarvan 110 kV Substation.
- Upgrade works on the turbine delivery route from Waterford Port.
- Ancillary forestry felling to facilitate construction and operation of the Development and any onsite forestry replanting.

A 15-year planning permission and 40-year operational life from the date of commissioning of the entire wind farm is being sought.

## **11.2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA**

### **11.2.1 Assessment Methodology**

Production of this Landscape and Visual Impact Assessment (LVIA) involved baseline work in the form of desktop studies and fieldwork comprising professional evaluation by qualified and experienced Landscape Architects. This entailed the following:

#### **11.2.1.1 Desktop Study**

- Establishing an appropriate Study Area from which to study the landscape and visual impacts of the Development.
- Review of a Zone of Theoretical Visibility (ZTV) map, which indicates areas from which the Development is potentially visible in relation to terrain within the Study Area.
- Review of relevant County Development Plans, particularly with regard to sensitive landscape and scenic view/route designations.
- Selection of potential Viewshed Reference Points (VRPs) from key visual receptors to be investigated during fieldwork for actual visibility and sensitivity.

#### **11.2.1.2 Fieldwork**

- Recording of a description of the landscape elements and characteristics within the Study Area
- Selection of a refined set of VRP's for assessment. This includes the capture of reference images and grid reference coordinates for each VRP location for the visualisation specialist to prepare photomontages.

#### **11.2.1.3 Appraisal**

- Consideration of the receiving landscape with regard to overall landscape character as well as the salient features of the Study Area including landform, drainage, vegetation, land use and landscape designations.
- Consideration of the visual environment including receptor locations such as centres of population and houses, transport routes, public amenities and facilities and designated and recognised views of scenic value.
- Consideration of design guidance and planning policies.
- Consideration of potentially significant construction stage and operational stage effects and the mitigation measures that could be employed to reduce such effects.
- Consideration of the significance of residual landscape impacts.
- Consideration of the significance of residual visual impacts aided by photomontages prepared at all of the selected VRP locations.
- Consideration of cumulative landscape and visual effects in combination with other surrounding developments that are either existing or permitted.

### 11.2.2 Relevant Legislation and Guidance

This LVIA uses methodology as prescribed in the following guidance documents:

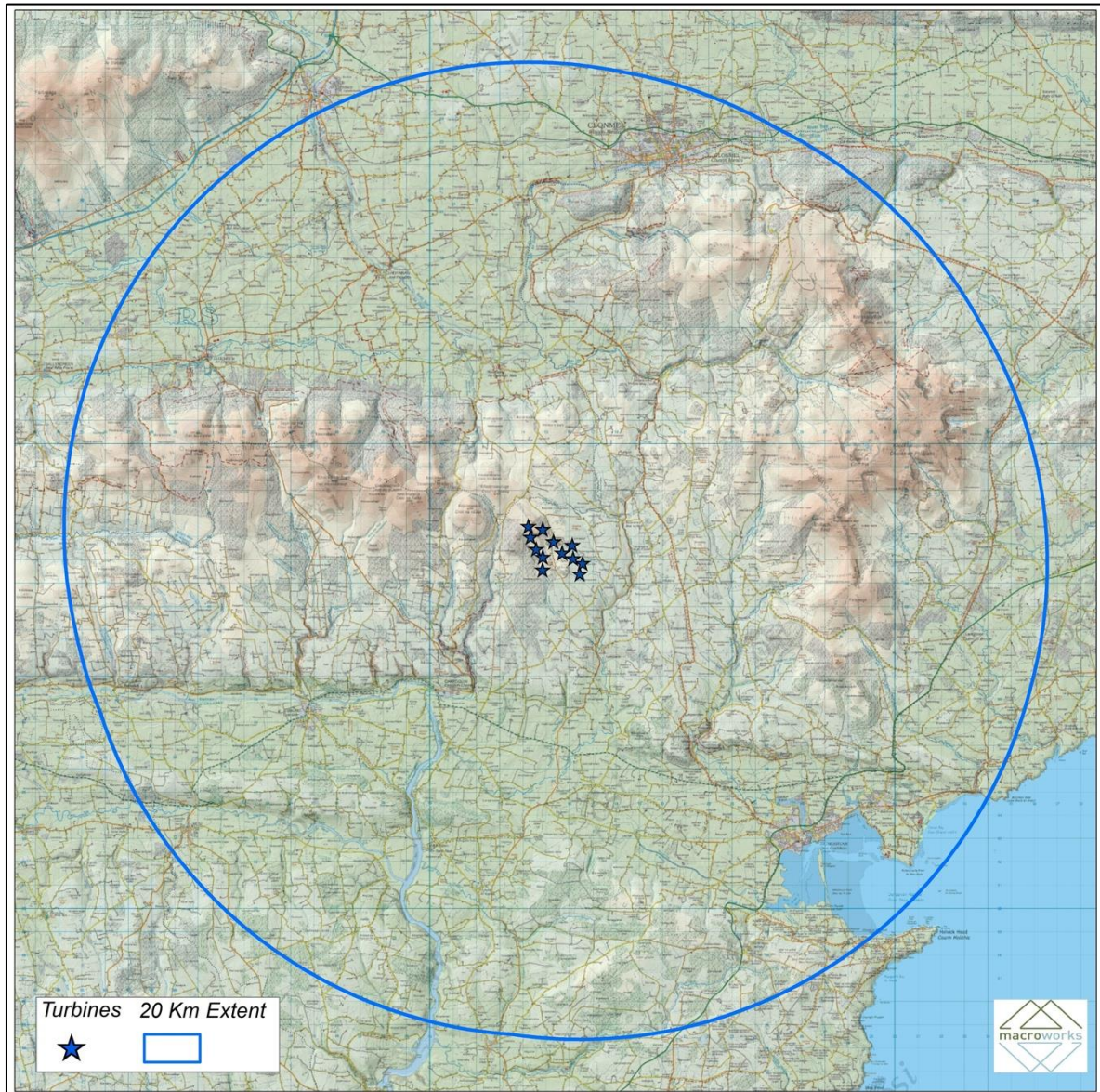
- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (2022) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Assessment Reports (Draft 2015).
- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment – Third Addition (2013).
- Scottish Natural Heritage (SNH) Guidance Note: Cumulative Effect of Windfarms (2012).
- Department of the Environment, Heritage and Local Government Wind Energy Development Guidelines (2006/2019 revision) and Preferred Draft Approach to revising the 2006 Guidance published 2017.
- Scottish Natural Heritage (SNH) Visual representation of wind farms: Best Practice Guidelines (version 2.2 - 2017).

### 11.2.3 Definition of Study Area

The Wind Energy Development Guidelines published by the Department of the Environment, Heritage and Local Government (2006/2019 revision) specify different radii for examining the zone of theoretical visibility of proposed windfarm projects (ZTV). The extent of this search area is influenced by turbine height, as follows:

- 15km radius for blade tips up to 100m
- 20km radius for blade tips greater than 100m
- 25km radius where landscapes of national and international importance exist.

In the case of this project, the blade tips are up to 185m high and, thus, the minimum ZTV radius recommended is 20km from the outermost turbines of the scheme. This is considered to be appropriate in this instance on the basis that significant impacts are not predicted to occur beyond 20km. Furthermore, there are not considered to be any sites of national or international importance between 20 – 25km and thus, the radius of the Study Area will remain at 20km. Notwithstanding the full 20km extent of the LVIA Study Area, there will be a particular focus on receptors and effects within the Central Study Area where there is higher potential for significant impacts to occur. When referenced within this assessment, the 'Central Study Area' is the landscape within 5km of the Site.



**Figure 11.1: Full 20km Extent of the Study Area**

#### **11.2.4 Computer Generated Images, Photomontages and Wireframes**

This LVIA is supported by a variety of computer generated maps and graphics as well as verifiable photomontages that depict the Development within the views from a range of represented visual receptor locations. These maps, graphics and visualisations consist of the following:

- Zone of Theoretical Visibility (ZTV) maps.
- Photomontages consisting of existing views, wireframe views and proposed views.

#### **11.2.5 Assessment Criteria for Landscape Effect**

The classification system used by Macro Works to determine the significance of landscape and visual impacts is based on the IEMA Guidelines for Landscape and Visual Impact

Assessment (2013). When assessing the potential impacts on the landscape resulting from a windfarm development, the following criteria are considered:

- Landscape character, value and sensitivity
- Magnitude of likely impacts
- Significance of landscape effects

The sensitivity of the landscape to change is the degree to which a particular landscape receptor (Landscape Character Area (LCA) or feature) can accommodate changes or new features without unacceptable detrimental effects to its essential characteristics. Landscape Value and Sensitivity is classified using the following criteria:

**Table 11.1: Landscape Value and Sensitivity**

Sensitivity	Description
Very High	Areas where the landscape character exhibits a very low capacity for change in the form of development. Examples of which are high value landscapes, protected at an international or national level (World Heritage Site/National Park), where the principal management objectives are likely to be protection of the existing character.
High	Areas where the landscape character exhibits a low capacity for change in the form of development. Examples of which are high value landscapes, protected at a national or regional level (Area of Outstanding Natural Beauty), where the principal management objectives are likely to be considered conservation of the existing character.
Medium	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.
Low	Areas where the landscape character exhibits a higher capacity for change from development. Typically, this would include lower value, non-designated landscapes that may also have some elements or features of recognisable quality, where landscape management objectives include, enhancement, repair and restoration.
Negligible	Areas of landscape character that include derelict, mining, industrial land or are part of the urban fringe where there would be a reasonable capacity to embrace change or the capacity to include the development proposals. Management objectives in such areas could be focused on change, creation of landscape improvements and/or restoration to realise a higher landscape value.

The magnitude of a predicted landscape impact is a product of the scale, extent or degree of change that is likely to be experienced as a result of the Development. The magnitude takes into account whether there is a direct physical impact resulting from the loss of landscape components and/or a change that extends beyond the Site Boundary that may have an effect on the landscape character of the area.

**Table 11.2: Magnitude of Landscape Impacts**

Sensitivity	Description
Very High	Change that would be large in extent and scale with the loss of critically important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an extensive change of the landscape in terms of character, value and quality.
High	Change that would be more limited in extent and scale with the loss of important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to a considerable change of the landscape in terms of character, value and quality.
Medium	Changes that are modest in extent and scale involving the loss of landscape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that would lead to noticeable changes in landscape character, and quality.
Low	Changes affecting small areas of landscape character and quality, together with the loss of some less characteristic landscape elements or the addition of new features or elements that would lead to discernible changes in landscape character, and quality.
Negligible	Changes affecting small or very restricted areas of landscape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable leading to no material change to landscape character, and quality.

The significance of a landscape impact is based on a balance between the sensitivity of the landscape receptor and the magnitude of the impact. The significance of landscape impacts is arrived at using the following matrix:

**Table 11.3: Landscape Impact Significance Matrix**

Scale/Magnitude	Sensitivity of Receptor				
	<i>Very High</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>Negligible</i>
<i>Very High</i>	Profound	Profound-substantial	Substantial	Moderate	Slight
<i>High</i>	Profound-substantial	Substantial	Substantial-moderate	Moderate-slight	Slight-imperceptible
<i>Medium</i>	Substantial	Substantial-moderate	Moderate	Slight	Imperceptible
<i>Low</i>	Moderate	Moderate-slight	Slight	Slight-imperceptible	Imperceptible
<i>Negligible</i>	Slight	Slight-imperceptible	Imperceptible	Imperceptible	Imperceptible

Note: Judgements deemed 'substantial' and above are considered to be 'significant impacts' in EIA terms.



## 11.2.6 Assessment Criteria for Visual Effect

As with the landscape impact, the visual impact of the Development will be assessed as a function of receptor sensitivity versus magnitude. In this instance, the sensitivity of visual receptors, weighed against the magnitude of visual effects.

### 11.2.6.1 Visual Sensitivity

Unlike landscape sensitivity, visual sensitivity has an anthropocentric basis. Visual sensitivity is a two-sided analysis of receptor susceptibility (people or groups of people) versus the value of the view on offer at a particular location.

To assess the susceptibility of viewers and the amenity value of views, the assessors use a range of criteria and provide a four-point weighting scale to indicate how strongly the viewer/view is associated with each of the criterion. Susceptibility criteria is extracted directly from the IEMA Guidelines for Landscape and Visual Assessment (2013), whilst the value criteria relate to various aspects of a view that might typically be related to high amenity including, but not limited to, scenic designations. These are set out below:

- **Susceptibility of receptor group to changes in view.** This is one of the most important criteria to consider in determining overall visual sensitivity because it is the single category dealing with viewer susceptibility. In accordance with the IEMA Guidelines for Landscape and Visual Assessment (3rd edition 2013) visual receptors most susceptible to changes in views and visual amenity are:

- *“Residents at home*
- *People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focussed on the landscape and on particular views*
- *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience*
- *Communities where views contribute to the landscape setting enjoyed by residents in the area*
- *Travellers on road rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened”.*

*“Visual receptors that are less susceptible to changes in views and visual amenity include:*

- *People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the landscape*
- *People at their place of work whose attention may be focussed on their work or activity, not their surroundings and where the setting is not important to the quality of working life”.*

### Values typically associated the visual amenity

- **Recognised scenic value of the view** (County Development Plan designations, guidebooks, touring maps, postcards etc). These represent a consensus in terms of which scenic views and routes within an area are strongly valued by the population because in the case of County Development Plans, at least, a public consultation process is required.
- **Views from within highly sensitive landscape areas.** Again, highly sensitive landscape designations are usually part of a county's Landscape Character Assessment, which is then incorporated with the County Development Plan and is therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the landscape around them.
- **Intensity of use, popularity.** Whilst not reflective of the amenity value of a view, this criterion relates to the number of viewers likely to experience a view on a regular basis and whether this is significant at county or regional scale.
- **Connection with the landscape.** This considers whether or not receptors are likely to be highly attuned to views of the landscape i.e. commuters hurriedly driving on busy national route versus hill walkers directly engaged with the landscape enjoying changing sequential views over it.
- **Provision of elevated panoramic views.** This relates to the extent of the view on offer and the tendency for receptors to become more attuned to the surrounding landscape at locations that afford broad vistas.
- **Sense of remoteness and/or tranquillity.** Remote and tranquil viewing locations are more likely to heighten the amenity value of a view and have a lower intensity of development in comparison to dynamic viewing locations such as a busy street scene, for example:
- **Degree of perceived naturalness.** Where a view is valued for the sense of naturalness of the surrounding landscape it is likely to be highly sensitive to visual intrusion by obvious human interventions.
- **Presence of striking or noteworthy features.** A view might be strongly valued because it contains a distinctive and memorable landscape feature such as a promontory headland, lough or castle.
- **Historical, cultural or spiritual value.** Such attributes may be evident or sensed at certain viewing locations that attract visitors for the purposes of contemplation or reflection heightening the sense of their surroundings.
- **Rarity or uniqueness of the view.** This might include the noteworthy representativeness of a certain landscape type and considers whether other similar views might be afforded in the local or the national context.

- **Integrity of the landscape character in view.** This criterion considers the condition and intactness of the landscape in view and whether the landscape pattern is a regular one of few strongly related components or an irregular one containing a variety of disparate components.
- **Sense of place.** This criterion considers whether there is special sense of wholeness and harmony at the viewing location.
- **Sense of awe.** This criterion considers whether the view inspires an overwhelming sense of scale or the power of nature.

Those locations where highly susceptible receptors or receptor groups are present and which are deemed to satisfy many of the view value criteria above are likely to be judged to have a high visual sensitivity and vice versa.

#### 11.2.6.2 Visual Impact Magnitude

The magnitude of visual effects is determined on the basis of two factors; the visual presence of the proposal and its effect on visual amenity.

Visual presence is a somewhat quantitative measure relating to how noticeable or visually dominant the proposal is within a particular view. This is based on a number of aspects beyond simply scale in relation to distance. Some of these include the extent of the view as well as its complexity and the degree of existing contextual movement experienced such as might occur where turbines are viewed as part of / beyond a busy street scene. The backdrop against which the development is presented and its relationship with other focal points or prominent features within the view is also considered. Visual presence is essentially a measure of the relative visual dominance of the proposal within the available vista and is expressed as such i.e. minimal, sub-dominant, co-dominant, dominant, highly dominant.

For wind energy developments, a strong visual presence is not necessarily synonymous with adverse impact. Instead, the 2012 Fáilte Ireland survey entitled 'Visitor Attitudes On The Environment – Windfarms' found that:

*“Compared with other types of development in the Irish landscape, windfarms elicited a positive response when compared to telecommunication masts and steel electricity pylons”*  
.... and that

*“most (tourists) felt that their presence did not detract from the quality of their sightseeing, with the largest proportion (45%) saying that the presence of the windfarm had a positive impact on their enjoyment of sightseeing...”*

The purpose here is not to suggest that turbines are either inherently liked or disliked, but rather to highlight that the assessment of visual impact magnitude for wind turbines is more

complex than just the degree to which turbines occupy a view. Furthermore, a clear and comprehensive view of a windfarm might be preferable in many instances to a partial, cluttered view of turbine components that are not so noticeable within a view. On the basis of these reasons, the visual amenity aspect of assessing impact magnitude is qualitative and considers such factors as the spatial arrangement of turbines both within the scheme and in relation to surrounding terrain and land cover. It also examines whether the Development contributes positively to the existing qualities of the vista or results in distracting visual effects and disharmony.

It should be noted that as a result of this two-sided analysis, a high order visual presence can be moderated by a low level of effect on visual amenity and vice versa. Given that wind turbines do not represent significant bulk; visual impacts result almost entirely from visual 'intrusion' rather than visual 'obstruction' (the blocking of a view). The magnitude of visual impacts is classified in the following table derived from the Guidelines for Landscape and Visual Impact Assessment:

**Table 11.4 Magnitude of Visual Impacts**

Sensitivity	Description
Very High	The proposal obstructs or intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. An extensive degree of visual change will occur within the scene completely altering its character, composition and associated visual amenity
High	The proposal obstructs or intrudes into a significant proportion or important part of the available vista and is one of the most noticeable elements. A considerable degree of visual change will occur within the scene substantially altering its character, composition and associated visual amenity
Medium	The proposal represents a moderate intrusion into the available vista and is a readily noticeable element. A noticeable degree of visual change will occur within the scene perceptibly altering its character, composition and associated visual amenity
Low	The proposal intrudes to a minor extent into the available vista and may not be noticed by a casual observer and/or the proposal would not have a marked effect on the visual amenity of the scene
Negligible	The proposal would be barely discernible within the available vista and/or it would not influence the visual amenity of the scene

### 11.2.6.3 Visual Impact Significance

As stated above, the significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude. This relationship is expressed in the significance matrix in **Table 11.3** above.

#### 11.2.6.4 Quality and Duration of Effects

In addition to assessing the significance of landscape/townscape effects and visual effects, EPA Guidance requires that the quality of the effects is also determined. This could be negative/adverse, neutral, or positive/beneficial.

- Positive Effects: A change which improves the quality of the environment;
- Neutral and/or balanced Effects: No effects, or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
- Negative/adverse Effects: A change that reduces the quality of the environment

The same EPA guidelines also set out categories of impact duration:

- Temporary – Lasting for one year or less;
- Short Term – Lasting one to seven years;
- Medium Term – Lasting seven to fifteen years;
- Long Term – Lasting fifteen years to sixty years; and
- Permanent – Lasting over sixty years.

In the case of commercial wind energy developments and the associated introduction of new moving structures within rural and upland areas, the quality of landscape and visual effects will almost always be negative, rather than positive or even neutral. Unless otherwise stated, the quality of landscape and visual effect judgements herein can be taken as negative.

In terms of duration, the proposed turbines will have a Long Term impact as the permission is being sought for a 40 year period after which the turbines will be decommissioned. Some other elements of the proposed development relating to access tracks and elements of the grid connection will likely remain in perpetuity and will therefore have Permanent effects.

### 11.3 BASELINE DESCRIPTION

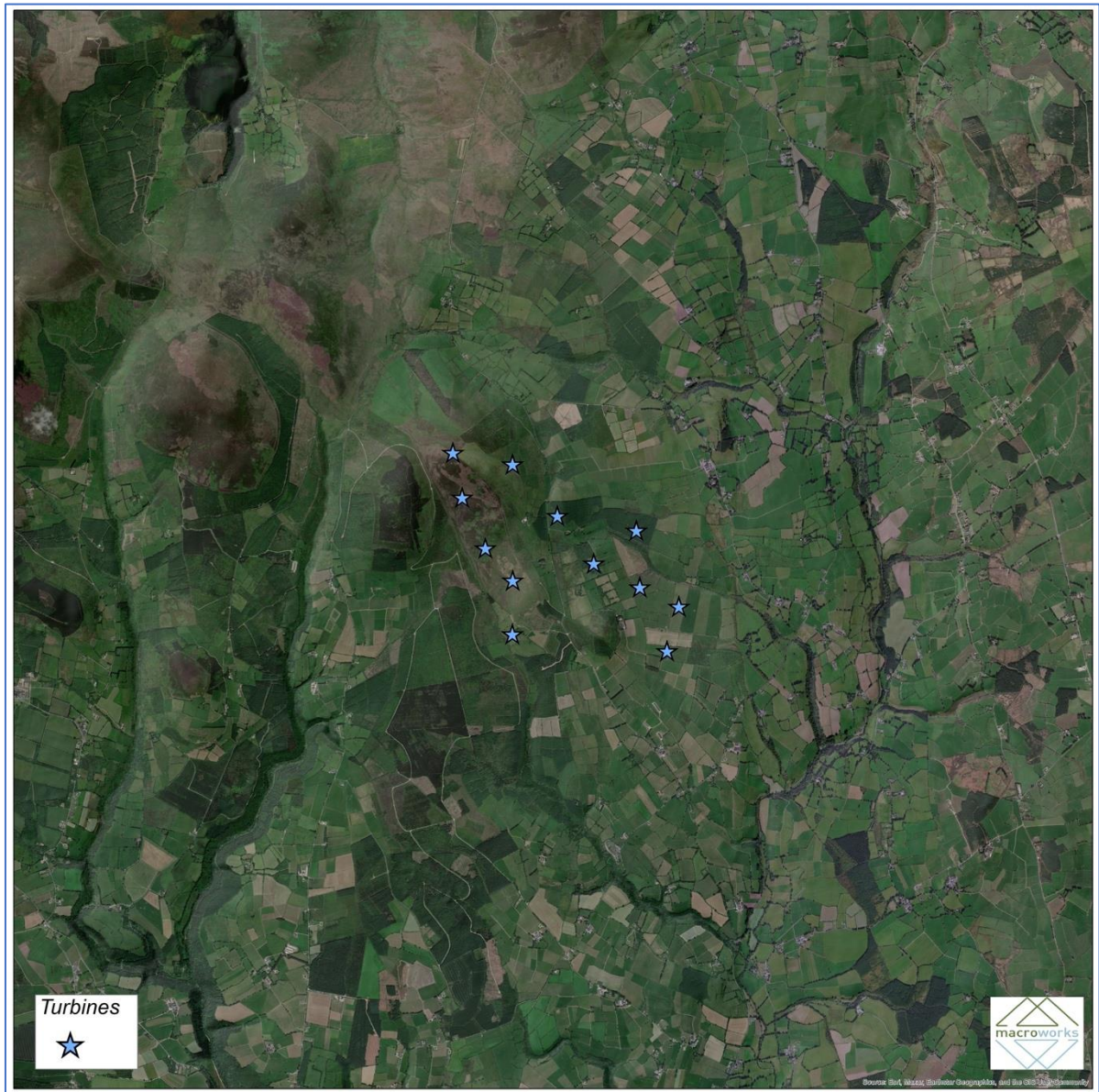
#### 11.3.1 Landscape Baseline

The landscape baseline represents the existing landscape context and is the scenario against which any changes to the landscape brought about by the proposal will be assessed. This also includes reference to any relevant landscape character appraisals and the current landscape policy context (both are generally contained within County Development Plans). A description of the landscape context of the proposed wind farm site and wider Study Area is provided below under the headings of landform and drainage, vegetation and land use, centres of population, transport routes and public amenities and facilities as well as the immediate site context. Additional descriptions of the landscape, as viewed from each of the selected viewpoints, are provided under the detailed assessments later using a similar

structure. Although this description forms part of the landscape baseline, many of the landscape elements identified also relate to visual receptors i.e. places and transport routes from which viewers can potentially see the proposed development. The visual resource will be described in greater detail below.

### **11.3.2 Landform and Drainage**

On a broad scale, the proposed development is located along the foothills of the Knockmealdown Mountains south of the Waterford – Tipperary County boundary. The proposal site is situated across the eastern and southern extents of Broemountain (430m AOD) and Knocknasheega Hill (430m AOD) on sloping lands that drain in an east/south-easterly direction. The Farnane River Flows directly through the site in a southerly direction, whilst the Glenshelane River flows through a broad valley just over c.1km west of the site. Both of these watercourses empty into the River Blackwater, which is one of the most prominent rivers within the Study Area and is located some c. 6km southwest of the site. The River Suir is another notable watercourse within the Study Area and is located some c.7km north of the site. In terms of the surrounding landforms, beyond the Glenshelane valley to the west of the site, the land rises steeply towards the Knockmealdown Mountains, which extend throughout the western half of the Study Area. The Commeragh and Monavullagh Mountains and their steep escarpments and rocky outcrops rise in the wider eastern half of the Study Area, whilst the wider south-eastern periphery of the Study Area encompasses sections of Waterford's rugged coastline and Dungarvan Harbour.

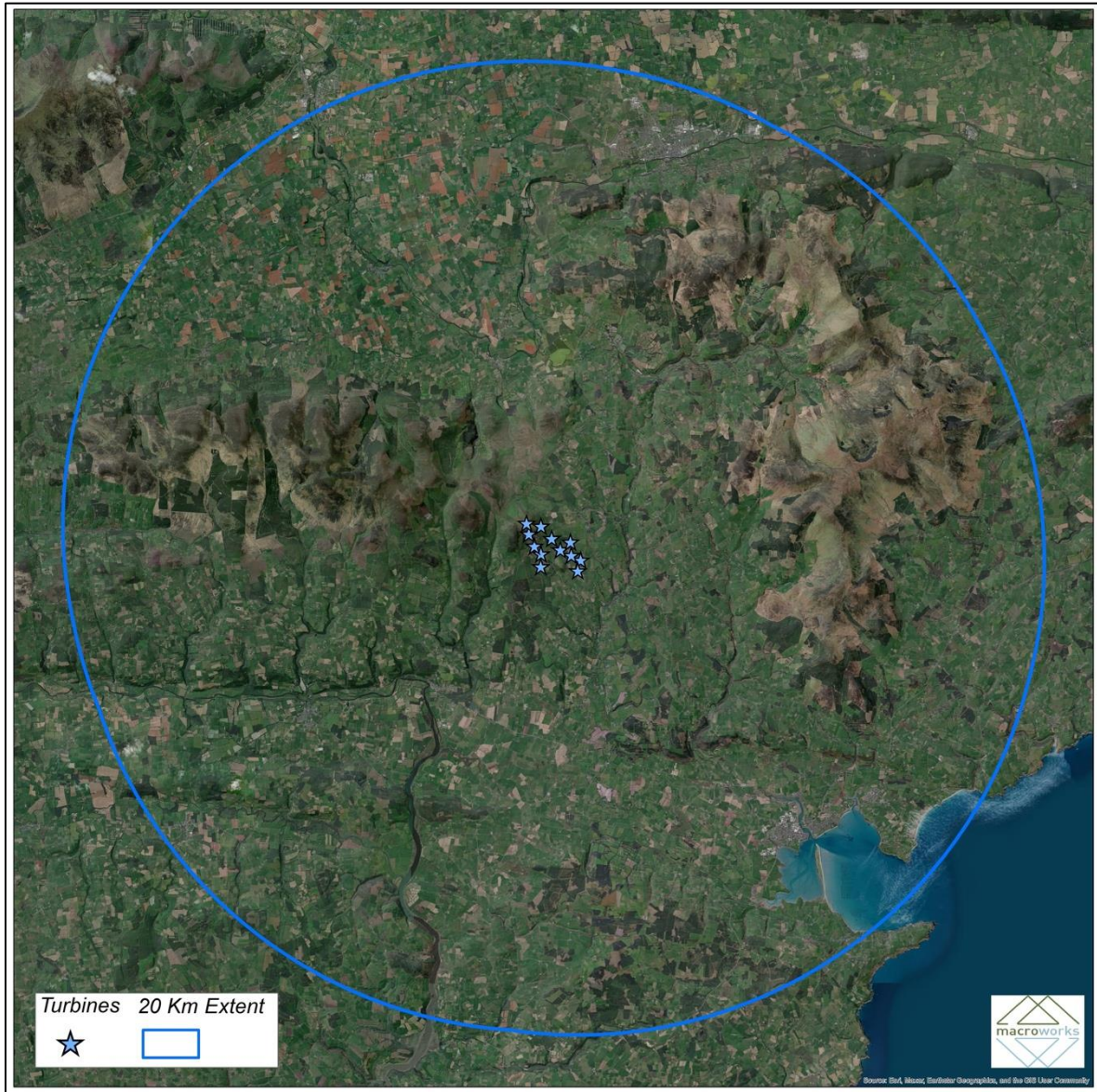


**Figure 11.2: Aerial photograph showing the landscape context of the site and its immediate surrounds.**

### 11.3.3 Vegetation and Land use

Whilst the principal land use within the central and wider Study Area is pastoral farmland bound by mixed hedgerow vegetation, the site itself is cloaked in a mix of conifer forest plantations, moorland and area of pastoral farmland. Pastoral farmland is the dominant land use in much of the low-lying and transitional parts of the Study Area, whilst blocks of conifer forest tend to cloak the foothills of the mountain ranges within the Study Area. Much of the elevated mountainous parts of the Study Area are cloaked in extensive areas of moorland and upland heath. Linear swathes of riparian woodland often flank the corridors of the many streams and river corridors within the Study Area, such as the Glenshelane River located to the west of the site. In terms of urban land uses, the settlements of Dungarvan and Clonmel

account for the most notable areas of urban land cover within the Study Area. Other notable anthropogenic land uses within the study area and its wider surrounds include the major transport corridors of the N24, N25 & N72, whilst existing wind farm development is also located along the rolling lands in the southern half of the Study Area.



**Figure 11.3: Aerial photograph showing the landscape context of the wider Study Area**

### 11.3.4 Landscape Policy Context and Designations

#### 11.3.4.1 The Department of Environment, Heritage and Local Government Wind Energy Development Guidelines (2006)

The Wind Energy Development Guidelines (2006/2019 revision) provide guidance on wind farm siting and design criteria for a number of different landscapes types. The site of the proposed development is considered to be located within a relatively complex landscape



setting that is most consistent with the 'Transitional Marginal Landscape' type from the Wind Energy Development Guidelines. However, the wider context does encompass characteristics from a mix of the landscape types including, 'Mountain Moorland' and 'Hilly and Flat Farmland'.

The most relevant recommendations for the 'Transitional Marginal' Landscape type are set out below, but with consideration of the guidance relating to other relevant landscape types considered thereafter.

### **Transitional Marginal Landscapes:**

**Location** – *“As wind energy developments, for reasons of commercial viability, will typically be located on ridges and peaks, a clear visual separation will be achieved from the complexity of lower ground.”*

*“wind energy developments might also be located at lower levels in extensive areas of this landscape type, where they will be perceived against a relatively complex backdrop. In these situations it is important to minimise visual confusion such as the crossing by blade sets of skylines, buildings, utility lines and varied landcover.”*

**Spatial extent** - *“Wind energy developments in these landscapes should be relatively small in terms of spatial extent. It is important that they do not dominate but achieve a balance with their surrounds, especially considering that small fields and houses are prevalent.”*

*“4(a) Wind energy development with regular spacing and linear layout – may not be appropriate due to the undulation of the land from as well as limited field pattern.”*

*“4(b) Wind energy development with irregular spacing and random layout -is more appropriate given the relative undulation of the setting.”*

*“4(c) Large wind energy development straddling two landscape character types within the same visual unit can create visual ambivalence and, thus, negative tension between the two character types involved.”*

**Spacing** - *“All options are possible, depending on the actual landscape characteristics. However, irregular spacing is likely to be most appropriate.”*

**Layout** - *“The likely location of wind energy developments on ridges suggests a linear or staggered linear layout whereas on broader hilltops they could be linear or clustered.”*

**Height** - *“...where the upper ground is relatively open and visually extensive, taller turbines may be more appropriate.”*

*“...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.”*

**Cumulative** - *“This would have to be evaluated on a case-by-case basis, but great caution should be exercised. The spatial enclosure often found in transitional marginal landscapes is likely to preclude the possibility of seeing another wind energy development. However, should two or more wind energy developments be visible within a confined setting a critically adverse effect might result, depending on turbine height and wind energy development extent and proximity.”*

It is considered that the siting and design of the proposed Wind Farm is generally consistent with the guidance noted above for the ‘Transitional Marginal Landscapes’ landscape type. In combination with the recommendations for ‘Transitional Marginal Landscapes’ landscape type, the siting and design recommendations for the ‘Mountain Moorland’ and ‘Hilly and Flat Farmland’ landscape types have also been considered when designing the turbine layout for the proposed Dyrick Hill Wind Farm as a result of the varied nature of the landscape within the central and wider Study Area. Most design options appear to be appropriate for ‘Transitional Marginal Landscapes’ and vary depending on the specific site. The design of the proposed development is in keeping with the Wind Energy Development guidance, which states “on broader hilltops they could be clustered”. The broad and open character of the site, which is more akin to ‘Mountain Moorland’ terrain, if not land cover, lends itself to a larger spatial extent than is otherwise provided for in the guidance associated with the more enclosed ‘Transitional Marginal Landscapes’.

### **Siting in Relation to Individual Properties (‘Setback’)**

Section 6.18 of the Draft Revised Wind Energy Development Guidelines (December 2019) refers to appropriate setback distances for visual amenity purposes. The guidelines outline a mandatory minimum setback distance of “500 meters” or the distance of “4 times the tip height” of the proposed turbines “between the nearest point of the curtilage of any residential property”. This is set out in SPPR2 which is included below:

*SPPR 2: With the exception of applications where reduced setback requirements have been agreed with relevant owner(s) as outlined at 6.18.2 below, planning authorities and An Bord Pleanála (where relevant), shall, in undertaking their development planning and development management functions, ensure that a setback distance for visual amenity purposes of 4 times the tip height of the relevant*

*wind turbine shall apply between each wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the proposed development, subject to a mandatory minimum setback of 500 metres from that residential property. Some discretion applies to planning authorities when agreeing separation distances for small scale wind energy developments generating energy primarily for onsite usage. The planning authority or An Bord Pleanála (where relevant), shall not apply a setback distance that exceeds these requirements for visual amenity purposes.*

The nearest residential dwelling to any of the proposed turbines is 320m, however, planning permission for a change of use is being sought for this property to convert it from current residential use to solely agricultural/commercial use associated with the wind farm development. The nearest other residential dwelling is some 710m from the nearest turbine, however as per the guidance, an agreement has been made with the relevant landowner. Aside from this, the nearest residential habited dwelling is 749m from the nearest turbine, which exceeds the setback distance outlined in the the current 2006 Guidelines and the Draft Revised Guidelines (2019). As per the guidelines, a reduced setback distance has been agreed with the owner of this dwelling.

### **11.3.5 Waterford City and County Development Plan 2022-2028**

#### **11.3.5.1 Waterford Landscape and Seascape Character Assessment 2020**

A Landscape and Seascape Character Assessment was prepared for County Waterford in 2020 and forms part of the current Waterford City and County Development Plan. The Landscape and Seascape Character Assessment subdivides the counties landscape in to 7 landscape types and a subsequent 28 landscape character units. The proposed development straddles the border of both the 'Upland' and 'Foothills' landscape types and across both the landscape character units '6B – Knockmealdown Uplands' and '5C – Tooaneena Foothills' (**Figure 11.4** below). The Landscape and Seascape Assessment also sets out the 'degrees of sensitivity' of Waterford's landscape and describes the landscape of Waterford as comprising "a series of compartments each of which has a distinctive character." Table 8.2 of the Landscape and Seascape Assessment assigns the Waterford's landscape four layers of sensitivity, each of which "indicates the extent to which the landscape will be vulnerable to change in its character". Guidelines in relation to each of these sensitivity classifications are outlined below:

- **Most Sensitive** – *Landscape Character Areas and features designated as Most Sensitive represent the principal features which create and sustain the character and distinctiveness of the surrounding landscape. To be considered for permission,*

*development in or in the environs of these areas must be shown not to impinge in any significant way upon its character, integrity or uniformity when viewed from the surroundings. Particular attention should be given to the preservation of the character and distinctiveness of these areas as viewed from scenic routes and the environs of archaeological and historic sites.*

- **High Sensitivity** – *These areas have distinctive, homogenous character, dominated by natural processes. Development in these areas has the potential to create impacts on the appearance and character of an extensive part of the landscape. Applications for development in these areas must demonstrate an awareness of these inherent limitations by having a very high standard of site selection, site layout, selection of materials and finishes.*
- **Low Sensitivity** – *A large area of County Waterford is designated as a landscape of low sensitivity. These areas have potential to absorb a wide range of new developments subject to normal planning and development control procedures. In these areas the Planning Authority will have regard to general restrictions to development such as scenic routes, siting, road set backs, road widening plans, parking numbers, road and sewage disposal criteria.*
- **Least Sensitive** – *A small area of Waterford City and County is designated least sensitive to landscape change. These are areas of concentrated existing development and infrastructure. Appropriate new development in these areas can reinforce the existing desirable land use patterns. Regard shall be had to site development standards namely density, building lines, height of structures and design standards. The overall aim is to ensure that the inherent character of city/town environs and town and village centres is maintained.*

As per **Figure 11.5** below, the proposed development is located across three sensitivity classifications – ‘Most Sensitive’, ‘High Sensitivity’ and ‘Low Sensitivity’. The most elevated parts of the site to the west in the surrounds of the summit of Broemountain have been classified with the ‘Most Sensitive’ designation, whilst the less elevated eastern parts of the site are cloaked in a ‘Low Sensitivity’ designation. A small area classified with a ‘High Sensitivity’ is also located between ‘Most’ and ‘Least’ sensitive designation, however, it is unclear as to what this relates to.

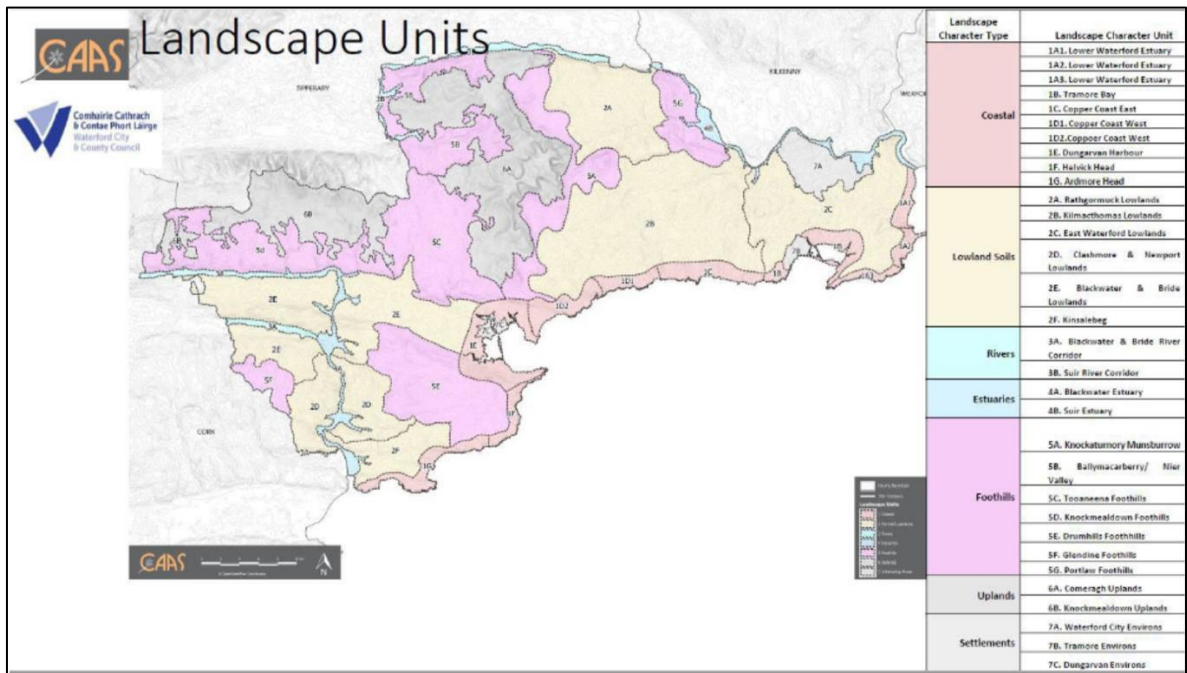


Figure 11.4: Excerpt from the Current Waterford City and County Development Plan 2022-2028 showing landscape character types and landscape character units in relation to the proposed development.

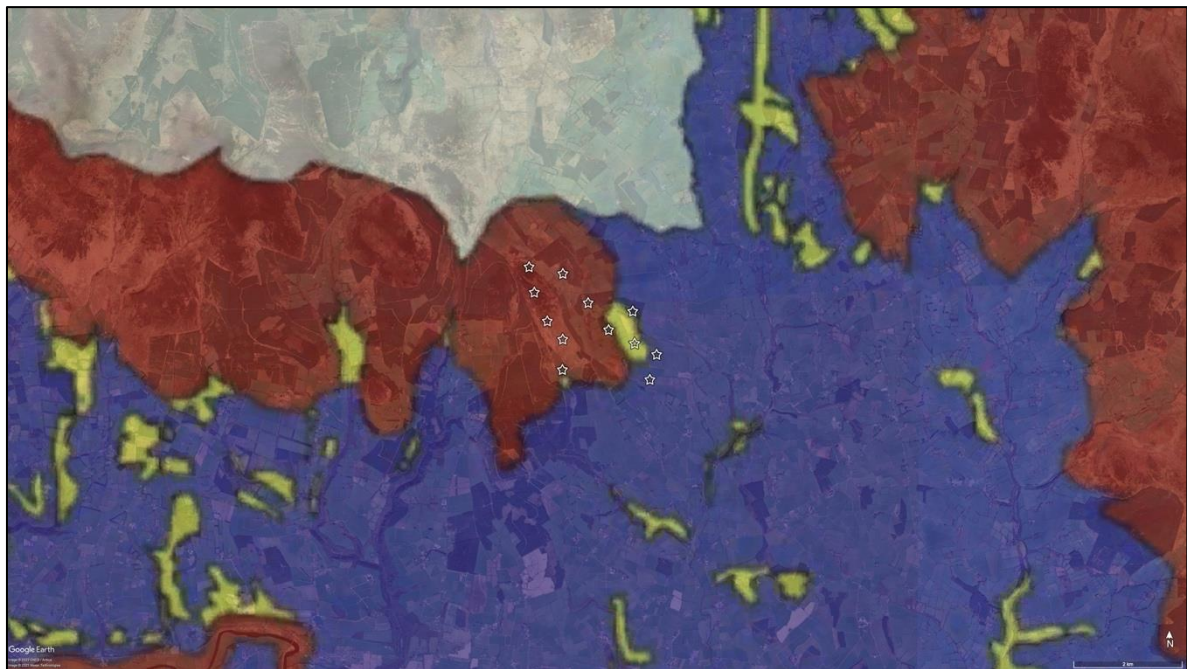


Figure 11.5: Excerpt from the Current Waterford City and County Development Plan 2022-2028 map viewer showing landscape sensitivity classifications in relation to the proposed turbines (Red – Most Sensitive, Yellow – High Sensitivity, Blue – Low Sensitivity)

### 11.3.5.2 Waterford Renewable Energy Strategy 2016-2030 (Appendix 7)

A renewable energy strategy for Waterford is included in Appendix 7 of the current County Development Plan. Appendix 2 of the renewable energy strategy relates to wind energy development and outlines the amended wind energy zonings into three classifications as follows and is identified on the revised wind energy designations map. These include; 'Preferred Areas', 'Areas Open to Consideration', and 'No-Go Areas' (see **Figure 11.6** below). The current renewable energy strategy states that wind energy classification areas have been "*identified by way of overlaying the following series of maps and data:*

- *The Landscape and Seascape Character Assessment (Appendix 8 of the Development Plan);*
- *Natura 2000 network;*
- *Urbanised areas;*
- *Waterford Regional Airport Masterplan (Appendix 12 of the Development Plan);*
- *Wind energy mapping of adjacent local authorities;*
- *Major road infrastructure; and,*
- *Transmission grid."*

As per **Figure 11.6** below, the proposed development is located in an 'Exclusion Area', whilst a 'Preferred' area occurs to the south of the proposed development site. Policy in relation to renewable energy is included in chapter 6 of the current Waterford City and County Development Plan. Policy ULT13 relates to Renewable energy. The most relevant part of this policy in relation to the proposed development is included in the points below:

- *"The Wind Energy Designation Map and the Landscape and Seascape Character Assessment Map identify different landscape character areas and associated landscape sensitivities. These designations encompass the concept of buffers between areas of sensitivity which vary across the different landscape character types and their different locations. These buffers allow for gradual change between contrasting landscape sensitivities and associated wind energy designations to be considered, as necessary, when determining any development proposal."*

**Note:** Whilst the current renewable energy strategy for County Waterford identifies the proposed development within an 'exclusion area', this is in stark contrast with the previous version of the Waterford Renewable Energy Strategy (formed part of the previous Waterford County Development Plan 2011-2017 (as extended), which designated the site and surrounding landscape as an area 'Open to Consideration' in relation to wind energy development. It is also worth noting that this wind energy designation transitioned to a 'Preferred Area' wind energy classification less than 2.5km northeast of the site. Whilst the current Renewable Energy Strategy identifies some rationale for the updated wind energy

classifications throughout the county, it is still relatively ambiguous how areas once classified as 'Open to Consideration' and 'Preferred' for wind energy development can now be classified as 'exclusion areas'.

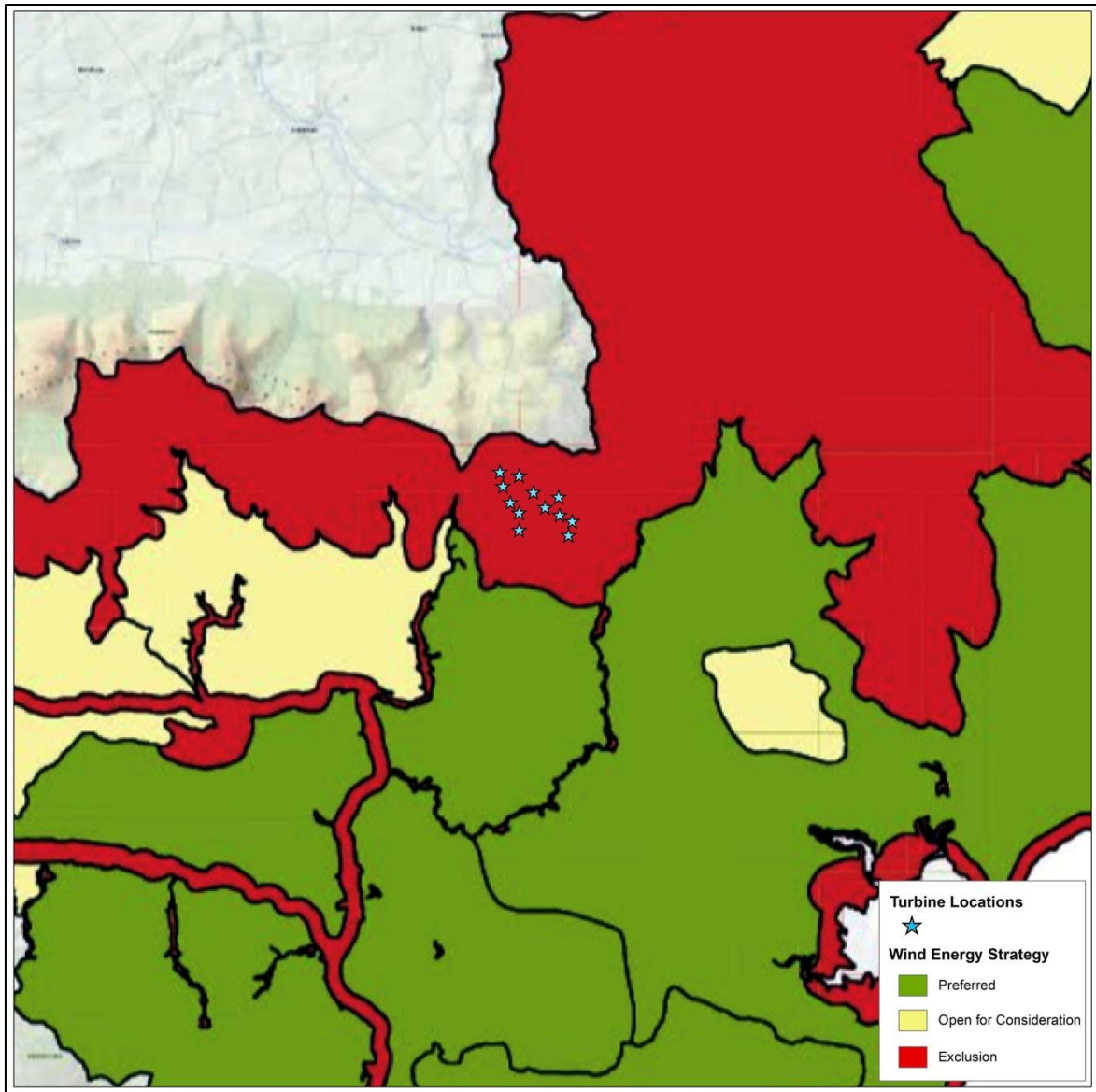


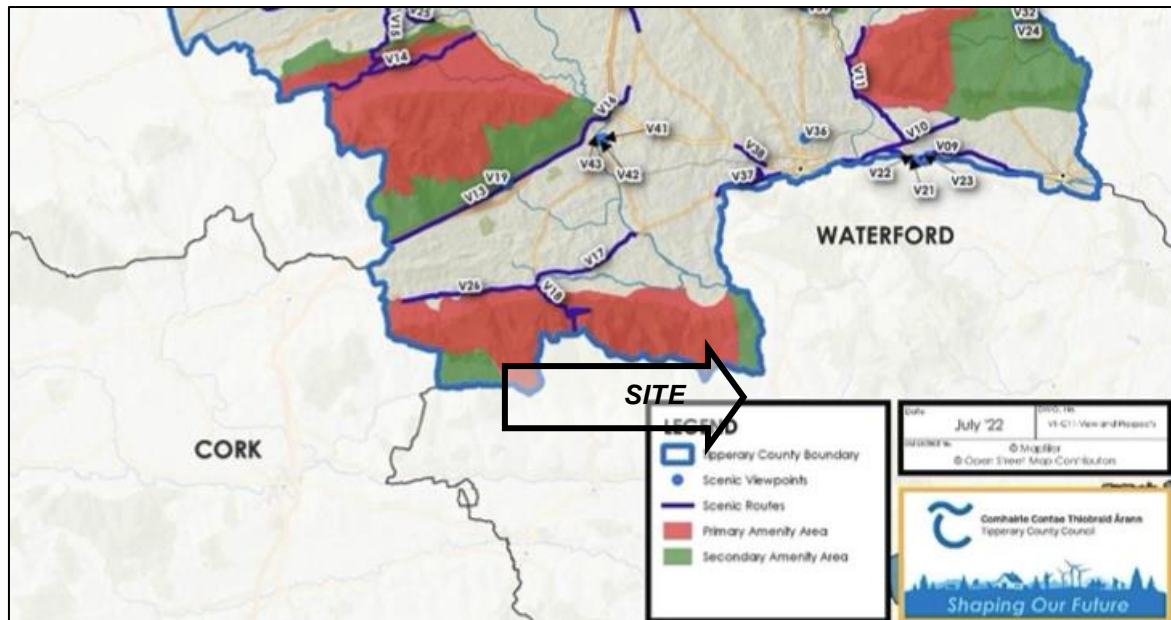
Figure 11.6: Excerpt from Appendix 2 of the current Renewable Energy Strategy showing updated wind energy classification areas in relation to the proposed development.

### 11.3.6 Tipperary County Development Plan (TCDP) 2022 – 2028

#### 11.3.6.1 TCDP – Volume 3: Tipperary Landscape Character Assessment

Although the proposed development is wholly contained within county Waterford, it sits immediately adjacent to the Tipperary border and as a result it is important to include any neighbouring landscape designations within County Tipperary. Section 11.7 of the current CDP relates to landscape and 'Primary and Secondary Amenity Areas' which are *particularly notable by virtue of their scenic and visual quality and offer significant opportunities for*

*tourism development and rural recreational activities.*" A 'Primary Amenity Area' and a 'Secondary Amenity Area' designation occurs along the Waterford – Tipperary boundary within the Study Area, as highlighted on **Figure 11.7** below.



**Figure 11.7: Excerpt from the current Tipperary County Development Plan 2022-2028 showing 'primary amenity areas' and 'secondary amenity areas' in relation to the proposed wind farm development.**

The current Tipperary County Development Plan includes a landscape character assessment for the County in Volume 3 of the CDP. This provides a hierarchy of landscape units beginning with high level 'Landscape Archetypes' then 'Landscape Character Types' and finally 23 geographically distinct 'Landscape Character Areas'.

The Landscape Character Assessment divides the county into four generic landscape archetypes; 'A – The Plains', 'B – The Lakelands', 'C – The Foothills' and 'D – The Uplands'. The proposed wind farm development sits adjacent to 'A – The Uplands', which are described as *"mountain landscapes with limited range of uses or types of vegetation. There are very low levels of settlement, services or roads. These landscapes are being increasingly used for amenities as well as energy and telecoms infrastructure."*

In terms of 'Landscape Character Types' and 'Landscape Character Areas' the 'Uplands' portion of the Study Area is further classified as the landscape character type 'D1 – Mountain & Upland'. This is then further broken down into 6 contrasting landscape character areas with the proposed wind farm sitting adjacent to the landscape character area '23 – Knockmealdown Mountain Mosaic'.



The landscape character type 'D1-Mountain & Upland' is described as *“areas of solitude, dominated by natural vegetation, and harsh climate overlook the busy, fertile plains and settlements of Tipperary. Though seldom visited these areas viewed across wide expanses of lowlands form the backdrop to almost all of the most scenic areas of the county. A number of them –such as Devilsbit, Slievenamon, and Galtymore have very distinctive profiles that contribute to a unique sense of place in their vicinity.”*

The landscape character area '23-Knockmealdown Mountain Mosaic' is described as *“an upland zone of moorland, forestry and marginal pasture. This area includes a sub-area comprised of the Araglin River Valley, which straddles the County boundary with Waterford, south of and parallel to the mountain range. The lesser peaks to west and east of the range are also considered sub-areas of the LCA.”*

Chapter 5 of the landscape character assessment relates to landscape sensitivity and designates the landscape character area '23-Knockmealdown Mountain Mosaic' as having a variety of sensitivities ranging from 'transitional sensitivity' to 'vulnerable'. The dominant sensitivity for this landscape character area is 'vulnerable' which has a 'very low' capacity and is described as *“areas to be avoided on account of a very significant potential for change of appearance or character due to the presence of development or use”*. The guideline suggested for this sensitivity designation is to **“Control unavoidable new developments or uses, or the intensification or expansion of established patterns of use and settlement – unless they can demonstrate capacity to sustain existing appearance and character.”**

Table 6.2 in the Landscape Character Assessment is a matrix showing the compatibility of each LCA with of various development types. 'LCA 23 – Knockmealdown Mountain Mosaic' is rated as having 'Least' Compatibility with wind farm development.

#### 11.3.6.2 TCDP – Volume 3: Tipperary Renewable Energy Strategy 2016

Whilst the proposed turbines are entirely contained within County Waterford, they are located just over 1km south of the Waterford – Tipperary border, and therefore, consideration should be given to wind energy policy within Tipperary.

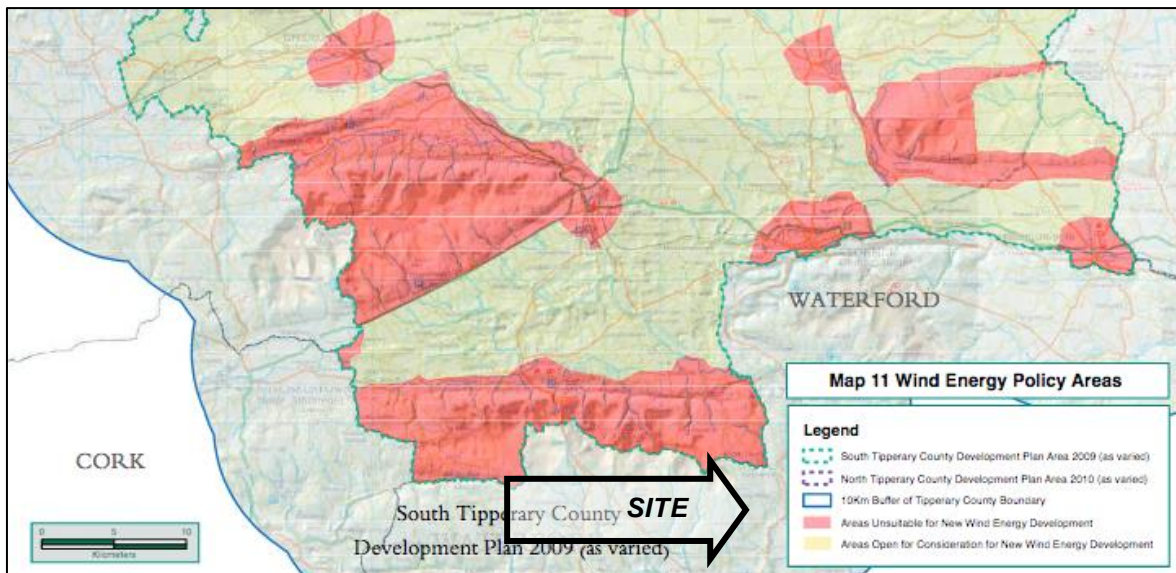
Tipperary County Council produced an updated renewable energy strategy in 2016 in which the Tipperary Wind Energy Strategy 2016 is included in Appendix 1. The wind energy strategy identifies two areas in relation to wind energy development which are outlined below:

**Areas 'Open For Consideration'** – *“wind energy development in these areas may or may not be appropriate, depending on the character of the landscape and the*

*potential impact of the proposed development. Any impact on the environment must be low and subject to proper planning and sustainable development, and the guidelines set out in this policy document.”*

**Areas ‘Unsuitable for Further Development’** – *“new wind energy development in these areas is not permitted. These areas have a special or unique landscape character where the main objective is conservation. Where there are existing wind energy developments in these areas, their repowering may be considered appropriate. Any impact on the environment must be low and subject to proper planning and sustainable development, and the guidelines set out in this strategy.”*

The nearest of these wind energy policy areas is an ‘Area Unsuitable for New Energy Development’ (see **Figure 11.8** below), which is contained across the southernmost parts of County Tipperary along the Knockmealdown Mountains and their surrounding foothills.



**Figure 11.8: Excerpt from the Tipperary Renewable Energy Strategy showing the approximate location of the proposed development in relation to wind energy classifications.**

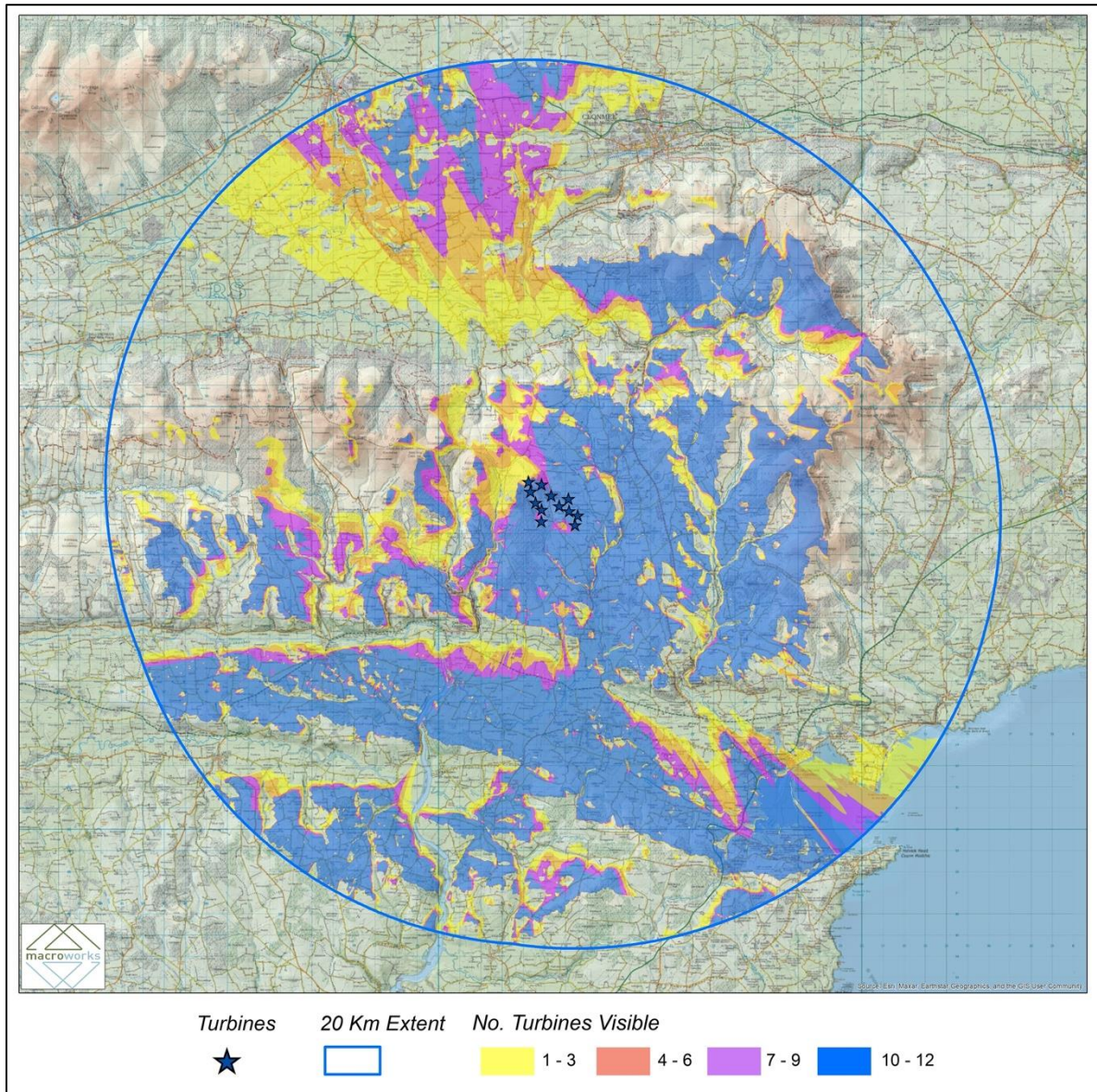
### 11.3.7 Visual Baseline

Only those parts of the Study Area that potentially afford views of the proposed Development are of interest to this part of the assessment. Therefore, the first part of the visual baseline is establishing a ‘Zone of Theoretical Visibility’ and subsequently, identifying important visual receptors from which to base the visual impact assessment.

#### 11.3.7.1 Zone of Theoretical Visibility (ZTV)

A computer generated Zone of Theoretical Visibility (ZTV) map has been prepared to illustrate where the proposed development is potentially visible from. The ZTV map is based

solely on terrain data (bare ground visibility), and ignores features such as trees, hedges or buildings, which may screen views. Given the complex vegetation patterns within this landscape, the main value of this form of ZTV mapping is to determine those parts of the landscape from which the proposed development will definitely not be visible, due to terrain screening within the 20km Study Area.



**Figure 11.9: Bare-ground Zone of Theoretical Visibility (ZTV) Map based on a turbine tip height of 185m. (See Volume III for larger scale map)**

The following key points are illustrated by the 'bare-ground' ZTV map (Figure 11.9 refers):

- Due to the landform of the site and the proposed turbine's general location across the north, south and east-facing slopes of Broemountain, much of the comprehensive visibility within the central Study Area is contained to the north, east and south of the

site. Whilst there are some isolated localised areas without turbine visibility (no colour pattern) in the surrounds of the River Finsk to the east of the site, much of the low rolling landscape in the southern, eastern and northern parts of the central Study Area have the potential to afford theoretic visibility of between 10-13 of the proposed turbines. The only settlement within the central Study Area is that of Tooraneena, located to the east of the site, and that has the potential to afford comprehensive views of the proposed turbines.

- Whilst some areas of comprehensive ZTV pattern (blue colour) are located to the west of the site in the surrounds of the Glenshelane River valley and along some elevated hilltops and ridges, the ZTV pattern tends to become more sporadic in the western half of the central Study Area due to the variation and complexities in the landforms in the surrounds of the Knockmealdown Mountains.
- In the wider northern half of the Study Area, the most notable areas of theoretic visibility tend to be located along the upland parts of the Comeragh Mountains, south of the settlement of Clonmel. There is also some potential for visibility in the wider northwest quadrant of the Study Area west of Clonmel and south of Cahir. The settlements of Ballymacarbry, Newcastle, Ardfinian, Clogheen, Clonmel and the outskirts of Cahir are all located in the northern half of the Study Area. Clogheen, Newcastle, Clonmel and Ballymacarbry all have limited or no potential for views of the proposed turbines. The settlement of Ardfinnan has the potential to afford views of up to 6 turbines, whilst the outskirts of Cahir has the potential to afford views of between 10-13 turbines, albeit from a distance of c.20km.
- Much of the potential turbine visibility in the eastern half of the Study Area is contained by the most elevated parts of the Comeragh and Monavullagh Mountains. A broad area of comprehensive ZTV pattern extends across much of the west-facing parts of the Comeragh and Monavullagh range. Beyond the most elevated ridges within these uplands areas in the eastern half of the 20km study extent, the potential for visibility is entirely eliminated.
- The largest and most notable areas of comprehensive ZTV pattern occur in the wider southern half of the Study Area due to the lower elevation of the terrain here. Whilst a corridor of no turbine visibility occurs along sections of the Blackwater River Valley and the River Bride, a large proportion of the landscape in the wider southern half of the Study Area is contained in comprehensive ZTV pattern. Nonetheless, the settlements of Cappoquin, Villerstown, Ballyduff and Tallow will have no view of the proposed turbines. Dungarvan is one of the larger settlements within the Study Area and has the potential to afford comprehensive views of the proposed turbines. In similar circumstances to Dungarvan, is the settlement of Lismore, which is located on sloping lands south of the Blackwater River Valley.

### 11.3.7.2 Views of Recognised Scenic Value

Views of recognised scenic value are primarily indicated within County Development Plans in the context of scenic views/routes designations, but they might also be indicated on touring maps, guide books, road side rest stops or on post cards that represent the area.

All of the scenic routes and views in both Waterford and Tipperary that fall inside the ZTV pattern (see **Figure 11.15**) were investigated during fieldwork to determine whether actual views of the proposed wind farm might be afforded. Where visibility may occur, a viewpoint has been selected for use in the visual impact appraisal later in this chapter.

**Table 11.5: Rational for selection of scenic designations within the relevant County Development Plans**

Scenic View or Route Reference (CDP):	Relevance to visual impact appraisal?	Represented herein by VRP No.
<b>Waterford City and County Development Plan 2022-2028 – Scenic Routes</b>		
<i>Scenic Route 1 (SR1)</i>	<b>Not Relevant</b> – majority of route located outside of ZTV	-
<i>Scenic Route 2 (SR2)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP9, VP15, VP19, VP20 & VP23
<i>Scenic Route 3 (SR3)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP23
<i>Scenic Route 4 (SR4)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP26
<i>Scenic Route 6 (SR6)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP30
<i>Scenic Route 7 (SR7)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP30
<i>Scenic Route 8 (SR8)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP7, VP13, VP25
<i>Scenic Route 9 (SR9)</i>	<b>Not Relevant</b> – majority of route located outside of ZTV and is heavily enclosed by mature vegetation	-
<i>Scenic Route 10 (SR10)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP22
<i>Scenic Route 11 (SR11)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP22
<i>Scenic Route 12 (SR12)</i>	<b>Not Relevant</b> – majority of route located outside of ZTV	-
<i>Scenic Route 13 (SR13)</i>	<b>Not Relevant</b> – route located outside of ZTV	-

Scenic View or Route Reference (CDP):	Relevance to visual impact appraisal?	Represented herein by VRP No.
<b>Waterford City and County Development Plan 2022-2028 – Scenic Views</b>		
<i>Scenic View 1 (SV1)</i>	<b>Not Relevant</b> – view oriented in the opposite direction to the proposed development	-
<i>Scenic View 2 (SV2)</i>	<b>Not Relevant</b> – view oriented in the opposite direction to the proposed development	-
<i>Scenic View 4 (SV4)</i>	<b>Not Relevant</b> – view oriented in the opposite direction to the proposed development	-
<i>Scenic View 5 (SV5)</i>	<b>Not Relevant</b> – view located outside of ZTV	-
<i>Scenic View 6 (SV6)</i>	<b>Not Relevant</b> – view located outside of ZTV	-
<i>Scenic View 7 (SV7)</i>	<b>Not Relevant</b> – view oriented in the opposite direction to the proposed development	-
<i>Scenic View 8 (SV8)</i>	<b>Not Relevant</b> – view located outside of ZTV	-
<i>Scenic View 11 (SV11)</i>	<b>Not Relevant</b> – view located outside of ZTV	-
<i>Scenic View 12 (SV12)</i>	<b>Not Relevant</b> – view located outside of ZTV	-
<i>Scenic View 13 (SV13)</i>	<b>Not Relevant</b> – view located outside of ZTV	-
<i>Scenic View 16 (SV16)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP28
<i>Scenic View 22 (SV22)</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP30
<i>Scenic View 24 (SV24)</i>	<b>Not Relevant</b> – view oriented in the opposite direction to the proposed development	-
<b>Tipperary County Development Plan 2022-2028 – Scenic Views</b>		
<i>View 17</i>	<b>Relevant</b> – potential for views of the proposed turbines along the easternmost section of this route	VP2
<i>View 18</i>	<b>Not Relevant</b> – view and route located outside of ZTV	-
<i>View 26</i>	<b>Not Relevant</b> – view and route located outside of ZTV	-
<i>View 37</i>	<b>Relevant</b> – whilst large sections of this route will be heavily contained by mature vegetation there is some potential for turbine visibility along the westernmost section of this route	VP1
<i>View 38</i>	<b>Relevant</b> – potential for views of the proposed turbines	VP1

Policy relating to scenic designations in both the Waterford and Tipperary County Development Plans is included below:

### **Waterford CDP**

*Policy Objective L 04: "We will protect the scenic routes and specified protected views identified in our Landscape Character Assessment (Appendix 8), including views to and from the sea, rivers, landscape features, mountains, landmark structures and urban settlements from inappropriate development that by virtue of design, scale, character or cumulative impact would block or detract from such views."*

### **Tipperary CDP**

*Planning Policy 11-17: "Ensure the protection of the visual amenity, landscape quality and character of designated 'Primary' and 'Secondary' amenity areas. Developments which would have a significant adverse material impact on the visual amenities of the area will not be supported. New development shall have regard to the following:*

- a) Developments should avoid visually prominent locations and be designed to use existing topography to minimise adverse visual impact on the character of primary and secondary amenity areas.*
- b) Buildings and structures shall integrate with the landscape through careful use of scale, form and finishes.*
- c) Existing landscape features, including trees, hedgerows and distinctive boundary treatment shall be protected and integrated into the design proposal."*

#### **11.3.7.3 Centres of Population and Houses**

The nearest and only notable settlement within the central Study Area is the small rural village of Tooraneena, which is situated east of the River Finisk and just under 3km east of the nearest turbine. Whilst the central Study Area comprises a modest rural population, the only other notable population centres include small linear clusters of residential dwellings and cross-road settlements.

Some of the largest centres of population within the Study Area include the settlements of Dungarvan and Clonmel. Dungarvan is located at the mouth of the Colligan River and is some 13.5km southeast of the site at its nearest point. Located on the opposite side of the Study Area, the settlement of Clonmel is situated along the banks of the River Suir and is just over 16km northeast of the site. Other notable settlements include Cappoquin and Lismore, both of which are situated along the River Blackwater and are located 6km and 12km southwest of the site, respectively. The small rural village of Ballymacarbry is located

along the River Nire, some 7km northeast of the site. Both settlements of Newcastle and Ardfinnian are situated along the River Suir and are located 6.5km north and 12km northwest of the site, respectively. Other small settlements within the wider surrounds of the Study Area include Lemybrien, Clogheen, Tallow, Villierstown, Aglish and Ballyduff.

#### **11.3.7.4 Transport Routes**

The nearest major route to the proposed development is the R671 regional road, oriented north-south through the central Study Area and is located adjacent to the River Finisk corridor, some 2km east of the site at its nearest point. The R672 regional road is oriented in a similar north-south direction through the Study Area and is just over 3.7km northeast of the site at its nearest point. The R669 regional road is located on the periphery of the 5km Study Area and is some 5.4km southwest of the nearest turbine. Aside from the aforementioned major routes, the central Study Area comprises a web of local roads, the nearest of which passes directly through the site.

Outside of the central Study Area, the most notable transport routes include the N25 and N24 national primary routes and the N72 national secondary route. The nearest of these three is the N72 national secondary route, situated in the southern half of the wider Study Area, some 6.6km southwest of the site at its nearest point. The N72 diverges from the N25 in the southeast quadrant of the Study Area and is located some c.14km from the proposed turbines at its nearest point. The N24 national primary route briefly enters the northern periphery of the Study Area north of Clonmel and is situated just under 17km north of the site at its nearest point. Other notable major routes in the wider surrounds of the Study Area include the R627, R628, R634, R665, R670, R668 and R675.

#### **11.3.7.5 Tourism, Recreational and Heritage Features**

As a result of the two notable mountainous areas within the Study Area, in addition to the scenic and varied coastline, the Study Area comprises a variety of amenity features, most notably walking and cycling trails. Some of the most noteworthy walking trails include the East Munster Way, the Tipperary Heritage Way, the Blackwater Way (Avondhu Way), the Nire Valley Trails and the Knockmealdown Trails. The nearest of these is the East Munster Way, which traverses both the Comeragh and Knockmealdown Mountains and is located some 5km north of the site at its nearest point. The Glenshelane Trails are the nearest walking routes to the site and are principally contained within the Glenshelane River Valley, located just over 2.3km southwest of the site at their nearest point.



The Sean Kelly Cycling trails are a collection of looped cycling trails that emanate from the centre of Dungarvan, some of which traverse the uplands and others traverse the coastal parts of the Study Area. The nearest of these routes is The Kelly Legacy loop, which follows a section of the R672 regional road some c.4km east of the site. This section of the regional road also hosts a section of the Comeragh Mountains drive – a scenic driving route that loops from Waterford City and around upland sections of the Comeragh Mountains.

A brief section of the popular Waterford Greenway is also located within the Study Area. The 46km route traverses low rolling lands north of Waterford's coastline, concluding at the settlement of Dungarvan and is located some c.15km southeast of the site at its nearest point.

The central and wider Study Area also includes several notable heritage features, including castle remnants, stately houses and demesnes, holy wells and monasteries. The nearest of these to the site is that of Mount Melleray Abbey, which is located along the sloping foothills of the Knockmealdown Mountains and dates back to the early 1800s. The striking Abbey affords broad panoramic views across the River Blackwater valley and beyond and is situated just under 5km west of the site at its nearest point. Other notable heritage features within the wider Study Area include Lismore Castle, Dungarvan Castle, Tourin House, Dromana House and Gardens, Careys Castle and St. Patricks Well.

The wider eastern half of the Study Area along the eastern flank of the Comeragh Mountains also comprises a number of popular walking trails and striking landscape features such as Mahon Falls and Coumshingaun Lough.

#### **11.3.7.6 Identification of Viewshed Reference Points as a Basis for Assessment**

The results of the ZTV analysis provide a basis for the selection of Viewshed Reference Points (VRP's), which are the locations used to study the landscape and visual impact of the proposed wind farm in detail. It is not warranted to include each and every location that provides a view of this development as this would result in an unwieldy report and make it extremely difficult to draw out the key impacts arising from the project. Instead, a variety of receptor locations was selected that are likely to provide views of the proposed wind farm from different distances, different angles and different contexts.

The visual impact of a proposed development is assessed using up to 6 categories of receptor type as listed below:

- Key Views (from features of national or international importance);

- Designated Scenic Routes and Views;
- Local Community views;
- Centres of Population;
- Major Routes; and
- Amenity and heritage features.

Where a VRP might have been initially selected for more than one reason it will be assessed according to the primary criterion for which it was chosen. The characteristics of each receptor type vary as does the way in which the view is experienced. These are described below.

### **Key Views**

These VRPs are at features or locations that are significant at the national or even international level, typically in terms of heritage, recreation or tourism. They are locations that attract a significant number of viewers who are likely to be in a reflective or recreational frame of mind, possibly increasing their appreciation of the landscape around them. The location of this receptor type is usually quite specific.

### **Designated Scenic Routes and Views**

Due to their identification in the County Development Plan this type of VRP location represents a general policy consensus on locations of high scenic value within the Study Area. These are commonly elevated, long distance, panoramic views and may or may not be mapped from precise locations. They are more likely to be experienced by static viewers who seek out or stop to take in such vistas.

### **Local Community Views**

This type of VRP represents those people who live and/or work in the locality of the proposed EIA Development, usually within a 5km radius of the site. Although the VRPs are generally located on local level roads, they also represent similar views that may be available from adjacent houses. The precise location of this VRP type is not critical; however, clear elevated views are preferred, particularly when closely associated with a cluster of houses and representing their primary views. Coverage of a range of viewing angles using several VRPs is necessary in order to sample the spectrum of views that would be available from surrounding dwellings.

### **Centres of Population**

VRPs are selected at centres of population primarily due to the number of viewers that are likely to experience that view. The relevance of the settlement is based on the significance of its size in terms of the Study Area or its proximity to the site. The VRP may be selected from any location within the public domain that provides a clear view either within the settlement or in close proximity to it.

### **Major Routes**

These include national and regional level roads and rail lines and are relevant VRP locations due to the number of viewers potentially impacted by the proposed development. The precise location of this category of VRP is not critical and might be chosen anywhere along the route that provides clear views towards the Site, but with a preference towards close and/or elevated views. Major routes typically provide views experienced whilst in motion and these may be fleeting and intermittent depending on screening by intervening vegetation or buildings.

### **Tourism, Recreational and Heritage Features**

These views are often one and the same given that heritage locations can be important tourist and visitor destinations and amenity areas or walking routes are commonly designed to incorporate heritage features. Such locations or routes tend to be sensitive to development within the landscape as viewers are likely to be in a receptive frame of mind with respect to the landscape around them. The sensitivity of this type of visual receptor is strongly related to the number of visitors they might attract and, in the case of heritage features, whether these are discerning experts or lay tourists. Sensitivity is also heavily influenced by the experience of the viewer at a heritage site as distinct from simply the view of it. This is a complex phenomenon that is likely to be different for every site. Experiential considerations might relate to the sequential approach to a castle from the car park or the view from a hilltop monument reached after a demanding climb. It might also relate to the influence of contemporary features within a key view and whether these detract from a sense of past times. It must also be noted that the sensitivity rating attributed to a heritage feature for the purposes of a landscape and visual assessment is not synonymous with its importance to the Archaeological or Architectural Heritage record.

The Viewshed Reference Points selected in this instance are set out in **Table 11.6** below and shown on the VP selection Map in the Photomontage Booklet.

**Table 11.6: Outline description of selected Viewshed Reference Points (See also VRP map at Volume III Figure 11.2)**

VRP No.	Location	Distance to Nearest Turbine(km)	Representative of	Direction of view
VP1	N24 at Kilmolash Lower	18.2km (T13)	Major route Scenic view	S
VP2	Local road south of Ardfinnian at Gortnalower	12.3km (T13)	Centre of population	SE
VP3	Local road at Sillaheens	10.8km (T08)	Amenity feature (East Munster Way)	S
VP4	Viewing point at Glendalough	14.2km (T05)	Scenic route Amenity feature (Sean Kelly Cycle Route & Comeragh Mountain Drive)	SW
VP5	Molough New Cemetery north of Newcastle	8.0km (T13)	Heritage feature Centre of population	S
VP6	Kilclooney Mountain (Fauscoum) west of Coumshingaun Lake	16.1km (T01)	Amenity feature	W
VP7	R672 at Boolavonteen	4.2km (T05)	Scenic route Major route Amenity feature	SW
VP8	Local road at Boolahallagh	1.8km (T13)	Local community views	S
VP9	Local road at Meol	3.4km (T13)	Scenic view	SE
VP10	Knockmealdown Summit	8.6km (T13)	Amenity feature	SE
VP11	Local road at Doon	933m (T05)	Local community views	S
VP12	Local road at Corradoon	949m (T05)	Local community views	SW
VP13	Local road at Tooraneena	3.0km (T01)	Centre of population Local community views	W

VRP No.	Location	Distance to Nearest Turbine(km)	Representative of	Direction of view
VP14	Local road at Dyrick	413m (T04)	Local community views	N,E,W,S
VP15	Local road at Coolagortboy	1.5km (T11)	Local community views Scenic route	E
VP16	Local road at Ballynaguilke Upper	1.3km (T01)	Local community views	W
VP17	Local road at Lyrattin	766m (T02)	Local community views	N, E, W
VP18	Mount Mellary Monastery	4.8km (T12)	Heritage and Amenity feature	NE
VP19	Local road at Knocknafrehane	2.8km (T09)	Scenic route Local community views	NE
VP20	Local road at Coolnacreena	2.3km (T09)	Scenic route Local community views	NE
VP21	Local road at Farnane Upper	1.7km (T02)	Local community views	N
VP22	Local road at Coumaraglin	9.3km (T01)	Scenic route Amenity feature (Sean Kelly Cycle Trails)	NW
VP23	R669 at Boherboyrea	5.7km (T09)	Scenic route Major route	NE
VP24	Redgate Cross Roads at Newtown	3.2km (T02)	Local community views	N
VP25	R672 at Colligan	6.1km (T02)	Major route Amenity feature (Sean Kelly Cycle Route & Comeragh Mountain Drive)	NW
VP26	Local road at Ballyneilligan Glebe east of Lismore	11.3km (T09)	Centre of population	NE
VP27	N72 at Kilcannon east of the River Finisk	7.7km (T02)	Major route	N

VRP No.	Location	Distance to Nearest Turbine(km)	Representative of	Direction of view
VP28	Local road northeast of Dromana House	10.5km (T09)	Amenity and heritage feature	NE
VP29	Strandside South road at Dungarvan	15.0km (T02)	Centre of population	NW
VP30	N72 at Barranalira (Viewing point)	16.9km (T02)	Scenic route Major route	NW

### 11.3.8 Cumulative Baseline

The SNH Guidelines relating to the Cumulative Effects of Wind Farms (2005) and GLVIA - 2013 identify that cumulative impacts on visual amenity consist of combined visibility and sequential effects. The same categories have also been subsequently adopted in the Landscape Institute's 2013 revision of the Landscape and Visual Impact Assessment Guidelines:

*“Combined visibility occurs where the observer is able to see two or more developments from one viewpoint. Combined visibility may either be in combination (where several windfarms are within the observer's arc of vision at the same time) or in succession (where the observer has to turn to see the various windfarms).*

*Sequential effects occur when the observer has to move to another viewpoint to see different developments. The occurrence of sequential effects may range from frequently sequential (the features appear regularly and with short time lapses between, depending on speed of travel and distance between the viewpoints) to occasionally sequential (long time lapses between appearances, because the observer is moving very slowly and / or there are large distances between the viewpoints.)”*

Cumulative impacts of windfarms tend to be adverse rather than positive, as they relate to the addition of moving manmade structures into a landscape and viewing context that already contains such development. Based on guidance contained within the SNH Guidelines relating to the Cumulative Effects of Wind Farms (2005) and the DoEHLG Wind Energy Guidelines (2006/2019 revision), cumulative impacts can be experienced in a variety of ways.

In terms of landscape character, additional wind energy developments might contribute to an increasing sense of proliferation. A new windfarm might also contribute to a sense of being

surrounded by turbines with little relief from the view of them. The term 'skylining' is used in the SNH Guidelines to describe the effect:

*“Where an existing windfarm is already prominent on a skyline the introduction of additional structures along the horizon may result in development that is proportionally dominant. The proportion of developed to non-developed skyline is therefore an important landscape consideration.”*

In terms of visual amenity, there is a range of ways in which an additional windfarm might generate visual conflict and disharmony in relation to other wind energy developments. Some of the most common include visual tension caused by disparate extent, scale or layout of neighbouring developments. A sense of visual ambivalence might also be caused by adjacent developments traversing different landscape types. Turbines from a proposed windfarm that are seen stacked in perspective against the turbines of nearer or further developments tend to cause visual clutter and confusion. Such effects are exacerbated when, for example, the more distant turbines are larger than the nearer ones and the sense of distance is distorted. **Table 11.7 below** provides criteria for assessing the magnitude of cumulative impacts.

**Table 11.7: Outline Magnitude of Cumulative Impact**

Magnitude of Impact	Description
Very High	<ul style="list-style-type: none"> <li>- The proposed windfarm will strongly contribute to wind energy development being the defining element of the surrounding landscape.</li> <li>- It will strongly contribute to a sense of windfarm proliferation and being surrounded by wind energy development.</li> <li>- Strongly adverse visual effects will be generated by the proposed turbines in relation to other turbines.</li> </ul>
High	<ul style="list-style-type: none"> <li>- The proposed windfarm will contribute significantly to wind energy development being a defining element of the surrounding landscape.</li> <li>- It will significantly contribute to a sense of windfarm proliferation and being surrounded by wind energy development.</li> <li>- Significant adverse visual effects will be generated by the proposed turbines in relation to other turbines.</li> </ul>
Medium	<ul style="list-style-type: none"> <li>- The proposed windfarm will contribute to wind energy development being a characteristic element of the surrounding landscape.</li> <li>- It will contribute to a sense of windfarm accumulation and dissemination within the surrounding landscape.</li> <li>- Adverse visual effects might be generated by the proposed turbines in relation to other turbines.</li> </ul>
Low	<ul style="list-style-type: none"> <li>- The proposed windfarm will be one of only a few windfarms in the surrounding area and will be viewed in isolation from most receptors.</li> <li>- It might contribute to windfarm development becoming a familiar feature within the surrounding landscape.</li> <li>- The design characteristics of the proposed windfarm accord with other schemes within the surrounding landscape and adverse visual effects are not likely to occur in relation to these.</li> </ul>

Magnitude of Impact	Description
Negligible	<ul style="list-style-type: none"> <li>- The proposed windfarm will most often be viewed in isolation or occasionally in conjunction with other distant wind energy developments.</li> <li>- Wind energy development will remain an uncommon landscape feature in the surrounding landscape.</li> <li>- No adverse visual effects will be generated by the proposed turbines in relation to other turbines.</li> </ul>

Within the Study Area there are 4 existing wind farms and 2 consented wind farm developments. There is also 1 wind farm at the pre-planning stage within the Study Area. The cumulative developments are set out below.

**Table 11.8: Cumulative Windfarms within the Study Area**

Windfarm Name	Number of Turbines	Distance and Direction from the Development Site Boundary	Status
Coumragappul Wind Farm	11	7.1km east of site	Pre-planning
Tierney Single Turbine	1	3.5km northeast of site	Operational
Woodhouse Wind Farm	8	10.8km south of site	Operational
Knocknamona Wind Farm	8	11.6km south of site	Consented
Barranafaddock Wind Farm	9	20km west of site	Operational
Ballycurreen Wind Farm	2	20km southeast of site	Operational

## 11.4 ASSESSMENT OF POTENTIAL EFFECTS

### 11.4.1 Do Nothing Effects

In this instance the do-nothing effect would be that the receiving landscape stays in the same or similar condition as it currently is, managed for a combination pastoral farmland and/ or forestry or left as semi-naturalistic moorland.

### 11.4.2 Landscape Impacts

Landscape impacts are assessed on the basis landscape sensitivity weighed against the magnitude of physical landscape effects within the Site and effects on landscape character within the wider landscape setting. This wider setting is considered in respect of the immediately surrounding landscape (<5km) as well as the broader scale of the Study Area (5-20km).



### 11.4.2.1 Landscape Character, Value and Sensitivity

#### **Central Study Area (<5km)**

Landscape value and sensitivity are considered in relation to a number of factors highlighted in the Guidelines for Landscape and Visual Impact Assessment 2013, which are set out below and discussed relative to the proposed project site and wider Study Area.

The central Study Area is principally a landscape of transition from the low rolling landscape surrounding the Knockmealdown Mountains to the more remote rugged uplands further to the west. As a result, the site and Study Area are characterised by typical foothill land uses and landscape features such as rolling hills, river valleys, blocks of conifer forest and pastoral farmland. The eastern half of the Study Area is a more typical lowland landscape comprising a patchwork of small to medium-sized pastoral fields bound by networks of hedgerow vegetation. It has working characteristics that relate to the subsistence of the local rural population and encompasses the only settlement within the central Study Area, the small village of Tooraneena, located on sloping lands east of the River Finisk. Whilst the lower parts of this landscape context along the river valley and stream corridors tend to be heavily enclosed by dense mature vegetation, broad views and vistas across the distant rolling landscape and uplands are often afforded from the more elevated rolling hilltops and plateau ridges beyond the context of the river corridors.

To the west, the landscape pattern slightly changes and is characterised by much broader land uses and landscape features, including larger pastoral fields, extensive blocks of conifer forest, elevated hilltops and sweeping river valleys. This part of the Study Area is where the transition towards the elevated uplands is much more noticeable. The Glenshelane River Valley, Broemountain, and Knockhanask are some of the more notable landscape features in the central Study Area. However, despite the change in the land formations and slight changes in land uses, the landscape values in this part of the Study Area are similar to the landscape to the east. This part of the central Study Area is principally a working transitional setting, although it contains some more susceptible recreational and heritage landscape features such as Mount Mellary and the Glenshelane walking trails. The eastern half of the central Study Area also encompasses sections of a number of driving and cycling trails.

In terms of scenic amenity value, several scenic routes and views traverse the central Study Area, the most notable agglomeration of which occurs in the western half of the Study Area, where the terrain begins to transition towards the Knockmealdown uplands. The nearest of these to the site is a section of Scenic Route 2, which traverses the local roads east and west of the Glenshelane River Valley. Whilst the Glenshelane River Valley presents a notable

degree of scenic amenity at a local level, one of the most notable aspects of scenic amenity from these routes and within the central Study Area is the Knockmealdown Mountains and their rolling rugged ridgelines. Furthermore, clear views of the Comeragh and Monavullagh Mountains are also afforded in the distance from some sections of this broad network of scenic routes. A scenic view is also located within the central Study Area to the northwest of the site along the Waterford – Tipperary county bounds, however, this view is oriented to the west in the opposite direction to the proposed development.

In terms of landscape designations, the central Study Area is contained within both the 'Upland' and 'Foothill' landscape types in County Waterford, highlighting the transitional nature of this landscape context. Much of the site and the more elevated parts of the landscape to the west are classified with a 'Most Sensitive' landscape sensitivity classification, whilst the landscape to the east and south is principally contained in a 'Low sensitivity' classification. A small area classified as 'High sensitivity' is also located between the two aforementioned sensitivity classifications above. Whilst some parts of the central Study Area, principally the elevated hilltops and ridges on the western periphery of the central Study Area, are more susceptible to change than the working transitional lands that cloak large parts of the central Study Area, it is not considered that the site and central Study Area represents a 'highly sensitive' landscape setting. Instead, the central Study Area is heavily influenced by typical working land uses, even those more elevated lands in its western half. This is a robust transitional landscape where typical productive rural landscape values outweigh scenic and naturalistic values that might be deemed more rare and vulnerable.

On balance of the reasons outlined above, the landscape sensitivity of the central Study Area is deemed to be Medium due to its robust working transitional character, albeit some localised parts of the central Study Area are much more susceptible to change, such as Mount Mellary Abbey and the more elevated lands on the western periphery of the central Study Area.

#### Wider Study Area (c.5-20km).

The wider Study Area is rich and varied and comprises uplands, transitional lands, lowlands and parts of Waterford's coastline. As a result of its diverse nature, it has an array of contrasting landscape sensitivities, qualities and associations.

Some of the most notable landscape features in the wider Study Area are its uplands, which include the Knockmealdown Mountains, Comeragh Mountains and Monavullagh Mountains. The broad elevated parts of the Study Area have a notable visual influence over the landscape of the wider Study Area and provide highly scenic vistas to and from these

mountains. As a result of their highly scenic nature, numerous designated scenic routes, views and recreation routes traverse these elevated lands and their near surroundings. In addition, several popular waymarked walking trails and looped national walking routes pass through these uplands and include the East Munster Way, the Tipperary Heritage Way, the Blackwater Way and the Nire Valley Looped trails. A network of cycling routes and driving routes also traverse the wider Study Area in the surrounds of the uplands, further highlighting the notable aspects of scenic amenity within the wider extent of the Study Area.

A small section of Waterford's coastline also pierces the southeast quadrant of the wider Study Area and possesses similar scenic qualities to the uplands. The coastline and its surrounding landscape are similarly littered with scenic routes, scenic views and amenity and heritage features, one of the most notable of which is the popular Waterford Greenway.

In terms of heritage, the wider Study Area encompasses numerous stately houses, demesne landscapes, and castle remnants. The most notable cluster of these is situated along the corridor of the Blackwater River in the southwest quadrant of the Study Area and includes Lismore Castle and Gardens, Dromana House and Gardens and Tourin House. In similar circumstances to the Blackwater River, the River Suir in the northern half of the Study Area also encompasses numerous amenity and heritage features. Sections of both the Tipperary Heritage Way and the East Munster Way flank the River Suir corridor, whilst other notable heritage features, including Marfield House and Demesne and Swiss Cottage, are also situated in its immediate surrounds.

Whilst a number of prominent landscape areas and features are located within the wider Study Area, it is principally contained in typical rural lands, the most prominent of which across the entire Study Area is pastoral farmland. Thus, despite the array of landscape features and sensitive visual receptors, for the most part, the landscape of the wider study has typical rural qualities that relate to the subsistence of the rural economy. The wider Study Area is heavily influenced by highly anthropogenic features such as major route corridors, large settlements, quarries and existing wind farm development. This is further represented in the current Waterford County Development Plan by the expansive areas of 'Low sensitivity' landscape that cloak much of the wider Study Area in Waterford. Furthermore, whilst the landscape in the surrounds of the Knockmealdown Mountains is classified as 'Primary' and 'Secondary Amenity Areas' in County Tipperary, the majority of the wider landscape in Tipperary is neither classified as 'Primary' or 'Secondary Amenity Areas', and instead represents a typical non-distinctive rural landscape context.

On balance of the reasons outlined above, it is considered the wider Study Area is richly diverse in terms of its landscape values and sensitivities. Whilst the predominance of the landscape is a typical rural landscape and is cloaked in a 'Low sensitivity' classification in the Waterford CDP, the highly prominent landscape features, such as the Knockmealdown Mountains, Comeragh and Monavullagh Mountains and the broad sweeping river valleys, have a considerable visual influence over the wider landscape context. As a result of the reasons outlined above, it is considered that the wider landscape has an overriding Medium landscape sensitivity, albeit some parts of the Study Area, such as the uplands, river valleys and the coastline, have a landscape sensitivity of High and in some cases Very High.

#### 11.4.2.2 Magnitude of Landscape Effect

The physical landscape as well as the character of the proposed development and its central Study Area (<5km) is affected by the proposed wind turbines as well as ancillary development such as access and circulation roads, areas of hard standing for the turbines, borrow pits, grid connection and the substation compounds. By contrast, for the wider landscape of the Study Area, landscape impacts relate exclusively to the influence of the proposed turbines on landscape character. The aspects of the proposed development that are likely to have an impact on the physical landscape and landscape character are described in Chapter 3 (Description of Proposed Development) with construction processes described in the Construction and Environmental Management Plan (CEMP) at **Appendix 2.1**.

#### **Construction Stage**

It is considered that the proposed wind farm development will have a modest physical impact on the landscape within the site as none of the proposed development features have a large 'footprint' and land disturbance/vegetation clearing will be relatively limited. The topography and land cover of the proposed site will remain largely unaltered with construction being limited to Access Tracks, Turbine Hardstands, the On-site Substation and Control Building compound, Temporary Construction Compound and proposed Met Mast. Excavations will tie into existing ground levels and will be the minimum required for efficient working. Any temporary excavations or stockpiles of material will be re-graded to marry into existing site levels and reseeded appropriately in conjunction with advice from the project ecologist.

The finalised internal Access Track layout has been designed to avoid environmental constraints, and every effort has been made to minimise the length of necessary roadway by utilising and upgrading the existing site access track. Furthermore, the road layout has been designed to follow the natural contours of the land wherever possible reducing potential for areas of excessive 'cut and fill'. There will be an intensity of construction stage activity

associated with the Access Tracks and Turbine Hardstands consisting of the movement of heavy machinery and materials, but this will be temporary/short term in duration and transient in location. The construction stage effects on landscape character from these activities will be minor.

There will be one 110kV on-site substation constructed to collect the generated power from the proposed Development before connecting to the national grid at the 110kV Dungarvan substation. The on-site substation will be located to the east of the local road that traverses the site in a north-south orientation and to the southwest of turbine T4. The proposed substation will be contained in an existing small pastoral field that is enclosed by existing hedgerow vegetation. The proposed substation compound, which will be enclosed by a 2.5 metre high steel palisade fence, will be heavily screened by the surrounding vegetation. The most notable construction stage landscape impacts resulting from the proposed on-site substation relate to the minor levelling of the site to form a level platform.

All internal site cabling will be underground and will follow site Access Tracks without the need for trenching through open ground. Indeed, the land cover of the site will only be interrupted as necessary to build the structures of the proposed wind farm and to provide access. Impacts from land disturbance and vegetation loss at the site are considered to be modest in the context of this transitional foothill landscape setting that is influenced by an array of working rural land uses.

A permanent meteorological (Met) mast will be erected on site in the southern extents of the site to the east of the access tracks and immediately south of T03. It will comprise of a 110m high lattice steel mast with a shallow concrete foundation. The most notable construction stage effects will relate to the minor amount of ground excavation required to facilitate the shallow foundations for the steel mast structure. The proposed project also includes the construction of a new site entrance along the R671 regional road in the townland of Lickoran.

The grid connection cabling will run from the onsite 110kV Substation across a combination of private lands and public roads generating land disturbance and associated movement of machinery and stockpiling of materials. The proposed grid connection route will include for directional drilling at up to 3 no. locations (2 no. water crossings and 1 HHD is required for a cattle underpass). No overhead lines are required for the connection. Connection works will involve the installation of ducting, joint bays, drainage and ancillary infrastructure. This will require delivery of plant and construction materials, followed by ground excavation laying of cables and subsequent reinstatement of trenches, and will result in minor and very localised construction stage landscape effects.

Site activity will be at its greatest during the construction phase due to the operation of machinery on site and movement of heavy vehicles to and from site. This phase will have a more significant impact on the character of the site and cable routes than the operational phase, but it is a 'short-term' impact that will cease as soon as the proposed development is constructed and becomes operational (approximately 14-15 months) from the commencement of construction).

There will be some long term/permanent construction stage effects on the physical landscape in the form of turbine foundations and hardstands, access tracks and a substation, but only the substation is likely to remain in perpetuity as part of the national grid network. It is likely, that with the exception of some residually useful access tracks, all other development features will be removed from the Site and it will be reinstated / restored to the prevailing land cover. Thus, the construction stage landscape effects of the proposed Development are largely reversible.

There will be some construction stage effects on landscape character generated by the intensity of construction activities (workers and heavy machinery) as well as areas of bare-ground and stockpiling of materials as identified in the Construction and Environmental Management Plan (CEMP). Such effects will be temporary/short term in duration and are, therefore, not considered to be significant. Overall, construction stage landscape effects are considered to be of a **High-medium** magnitude.

### **Operational Stage Effects on Landscape Character**

For most commercial wind energy developments, the greatest potential for landscape impacts to occur is as a result of the change in character of the immediate area due to the introduction of tall structures with moving components. Thus, wind turbines that may not have been a characteristic feature of the area become a new defining element of that landscape character. In this instance, wind turbines are not a characteristic feature of the immediate site context, but a single turbine development and an existing wind farm development are located in the wider surrounds of the Study Area to the south. Furthermore, an existing wind farm development also exists in a similar landscape context to the site, within a foothill landscape of the Knockmealdown Mountains some 20km west of the site. Thus, the effect therefore, is one of intensification and extension of an established land use in this landscape and not the introduction of a new and unfamiliar feature.

In terms of scale and function, the proposed wind farm is well assimilated within the context of the Central Study Area. This is due to the broad scale of the landform, landscape elements

and land use patterns. These attributes prevent the height and extent of the proposed wind farm causing the type of scale conflict that can occur in more intricate landscape areas. The broad hills and ridges in the immediate surrounds of the wind farm site comprise a notable utilitarian character due to the presence of working rural land uses such as agriculture and commercial scale forestry. Although the proposed development represents a stronger human presence and level of built development than currently exists on the site, it will not detract significantly from the production rural character of this foothill landscape.

It is important to note that in terms of duration, this development proposal represents a long term, but not permanent impact on the landscape and is reversible. The lifespan of the project is 40 years, after which time it will be dismantled and the landscape reinstated to prevailing conditions. Within 2-3 years of decommissioning there will be little evidence that a wind farm ever existed on the site.

The decommissioning phase will have similar temporary impacts as the construction phase with the movement of large turbine components away from the site. There may be a minor loss of roadside and trackside vegetation that has grown during the operational phase of the project, but this can be reinstated upon completion of decommissioning. Areas of hard standing that are of no further use will be reinstated and reseeded to blend with the prevailing surrounding land cover of the time. It is expected that the decommissioning phase would be completed within a period of approximately 3 months.

In summary, there will be physical impacts on the land cover of the site and cable route as result of the proposed Development during the operational phase, but these will be relatively minor in the context of this working rural landscape that comprises pockets of existing wind energy development and areas of commercial conifer forest. The scale of the proposed development will be well assimilated within its landscape context without undue conflicts of scale with underlying land form and land use patterns. For these reasons the magnitude of the landscape impact is deemed to be **High-medium** within the site and its immediate environs (c.1km) reducing to **Medium** for the remainder of the central Study Area. The quality of the landscape effects is deemed **Negative**. Beyond 5km from the site, the magnitude of landscape impact is deemed to reduce to **Low** and **Negligible** at increasing distances as the wind farm becomes a proportionately smaller and integrated component of the overall landscape fabric.

### 11.4.2.3 Significance of Potential Landscape Effects

The significance of landscape impacts is a function of landscape sensitivity weighed against the magnitude of landscape impact. This is derived from the significance matrix (Table 11.3) used in combination with professional judgement.

Based on a Medium sensitivity judgement and a High-medium magnitude of construction stage landscape impact, the significance of impact is considered to be **Substantial-moderate / Negative / Short-term** within and immediately around the site during construction, but reducing quickly with distance and broader context.

Based on a Medium sensitivity judgement and a High-medium / Medium magnitude of operational stage landscape impact, the localised significance of impact is considered to be **Substantial-moderate / Negative / Long-term** within and immediately around the site. Thereafter, significance will reduce to Moderate and Slight at increasing distances as the development becomes a progressively smaller component of the wider landscape fabric even in the context of higher sensitivity landscape units / features such as the Uplands to the east and west and the coastline in the southeast quadrant of the Study Area.

### 11.4.3 Residual Visual Effects

In the interests of brevity and so that this chapter remains focussed on the outcome of the visual assessment (rather than a full documentation of it), the visual impact assessment at each of the 30 selected representative viewpoint locations has been placed into **Appendix 11.1**. This section should be read in conjunction with both **Appendix 11.1** and the associated photomontage set contained in a separate booklet accompanying the EIAR. A summary table is provided below, which collates the assessment of visual impacts (**Table 11.9** below). A discussion of the results is provided thereafter.

**Table 11.9: Summary of Visual Impact Assessment at Representative Viewpoint Locations (Appendix 11.1)**

Visual Impact				
VP No.	Distance to nearest turbine	Visual Receptor Sensitivity	Magnitude of Visual Impact	Visual Impact Significance
VP1	18.2km (T13)	Medium	Low-negligible	Slight-imperceptible
VP2	12.3km (T13)	Medium	Low-negligible	Slight-imperceptible
VP3	10.8km (T08)	High-medium	Low	Slight
VP4	14.2km (T05)	High-medium	Low	Slight



<b>Visual Impact</b>				
<b>VP5</b>	8.0km (T13)	Medium	Low-negligible	<b>Slight-imperceptible</b>
<b>VP6</b>	16.1km (T01)	High	Low-negligible	<b>Slight-imperceptible</b>
<b>VP7</b>	4.2km (T05)	Medium-low	Medium-low	<b>Moderate-slight</b>
<b>VP8</b>	1.8km (T13)	Medium	Medium	<b>Moderate</b>
<b>VP9</b>	3.4km (T13)	High-medium	Low-negligible	<b>Slight-imperceptible</b>
<b>VP10</b>	8.6km (T13)	High	Low-negligible	<b>Slight</b>
<b>VP11</b>	933m (T05)	Medium	High-medium	<b>Substantial-moderate</b>
<b>VP12</b>	949m (T05)	Medium-low	High-medium	<b>Substantial-moderate</b>
<b>VP13</b>	3.0km (T01)	Medium	Medium	<b>Moderate</b>
<b>VP14</b>	413m (T04)	Medium-low	High	<b>Substantial-moderate</b>
<b>VP15</b>	1.5km (T11)	Medium	Medium-low	<b>Moderate-slight</b>
<b>VP16</b>	1.3km (T01)	Medium-low	High-medium	<b>Substantial-moderate</b>
<b>VP17</b>	766m (T02)	Medium	High-medium	<b>Substantial-moderate</b>
<b>VP18</b>	4.8km (T12)	Medium	Medium-low	<b>Slight</b>
<b>VP19</b>	2.8km (T09)	High-medium	Medium	<b>Moderate</b>
<b>VP20</b>	2.3km (T09)	Medium	Medium	<b>Moderate</b>
<b>VP21</b>	1.7km (T02)	Medium	Medium	<b>Moderate</b>
<b>VP22</b>	9.3km (T01)	High	Low	<b>Moderate-slight</b>
<b>VP23</b>	5.7km (T09)	High-medium	Medium-low	<b>Moderate-slight</b>
<b>VP24</b>	3.2km (T02)	Medium	Medium-low	<b>Moderate-slight</b>
<b>VP25</b>	6.1km (T02)	Medium	Low-negligible	<b>Slight-imperceptible</b>
<b>VP26</b>	11.3km (T09)	High-medium	Low-negligible	<b>Slight-imperceptible</b>
<b>VP27</b>	7.7km (T02)	Medium-low	Low	<b>Slight</b>
<b>VP28</b>	10.5km (T09)	High-medium	Low-negligible	<b>Slight-imperceptible</b>
<b>VP29</b>	15.0km (T02)	Medium	Low-negligible	<b>Slight-imperceptible</b>
<b>VP30</b>	16.9km (T02)	High	Low-negligible	<b>Slight-imperceptible</b>

### 11.4.3.1 Visual Impacts on Designated Views

Due to the varied and complex nature of the landscape within the Study Area, which comprises numerous notable landscape features, there are many scenic routes and scenic views within the 20km study extent. The most relevant scenic routes to the proposed development are those located nearest to the proposed development and have the most potential to afford near and clear views of the proposed turbines. Scenic routes within the central Study Area include Scenic Route SR2, which is located along the local and regional road network to the west of the site (c. 1.2km from the nearest turbine at its nearest point), whilst Scenic Route SR8 is located along the R672 regional road some c. 4km east of the site at its nearest point. It is also important to note that the depicted viewpoints located along scenic routes represent a static view. However, in reality, these routes are experienced as a journey and not as a series of fixed views. Thus, the representative viewpoints typically reflect the worst-case scenario in terms of turbine visibility. Furthermore, for many of these scenic routes, the proposed turbines have the potential to be heavily and, in some cases, entirely screened by surrounding terrain and vegetation. There is only one static scenic viewpoint within the central Study Area, which is located some 3.3km northwest of the site but is oriented in the opposite direction to the proposed development.

Scenic Route 2 (SR2) is described in the current CDP as “*the R668 north from Lismore and R660 north from Cappoquin*” and is located along the local and regional road network to the west of the site along the Knockmealdown Mountain foothills. Due to the scale of this scenic route designation, several viewpoints were chosen to represent this designation and, include VP9, VP15, V19, VP20 & VP23. The residual visual impact at this scenic route ranged from ‘Slight-imperceptible’ to ‘Moderate’, with the higher significance of visual impacts relating to clearer views of the proposed development as a whole. VP19 and VP20 represent some of the clearest views of the proposed development along this scenic route designation. VP19 is located to the west of the Glenshelane River Valley and affords a relatively broad view across the landscape context of the valley, where the proposed turbines present beyond the ridge to the east of the river valley. Whilst the proposed turbines will be viewed from here at a distance of just under 3km, they will be prominent features along this section of the scenic route, albeit they do not present with any sense of overbearing, nor do they appear over-scaled. VP20 represents a much closer view of the turbines from a section of the scenic route on the eastern side of the valley. Whilst the turbines will present at a relatively large scale and in a prominent manner from this section of the scenic route, a considerable number of the turbines will be screened by the intervening vegetation, and those turbines that are visible present in a highly legible manner. Furthermore, the main aspect of visual amenity along this section of the scenic route relates to the views across the valley and towards the

Knockmealdown Mountains, in the opposite direction to the site. A static scenic view designation (VP7 – View of Knockmealdowns from Lay-by along the L1025) also overlaps with a section of SR2 and is situated some 3.4km northwest of the nearest turbine in a contained valley context. The scenic view designation is oriented to the west, whereas the proposed turbines are located in the opposite direction to the east. Furthermore, the proposed development will be considerably screened from here, with only the blade set of one turbine partially visible along the elevated ridge to the east.

Scenic route 8 (SR8) is located to the east of the site and is described in the current CDP as “north-west from Dungarvan to Tooraneena on the R672. Third class North to Ballymacarbry. Join R671 to Clonmel taking the R678 and turbine south for third class route through the Comeraghs”. This scenic route designation is represented by viewpoints VP7, VP13 and VP25. Whilst VP25 is the only one of these views located along the scenic route designation, the two other viewpoints are representative of similar views that have the potential to be afforded from sections of the scenic route designation. The residual significance of visual impact ranges from ‘Moderate’ to ‘Slight-imperceptible’. The variation in impacts relates to the high degree of screening along this scenic route, where views to the west are heavily enclosed, especially the southern sections of this route. It is also important to note that large parts of the southern extent of this route are located outside of the ZTV and will afford no visibility of the proposed turbines. The northern sections of the route represented by V7 and VP13 have the potential to afford intermittent clear views of the turbines, however, due to the notable offset distance from the turbines of c.4km, they will not present in a highly prominent manner. Furthermore, in similar circumstances to the southern section of this route, large tracts of the northern extent of this route that follows the Nire River valley and passes west and north of the Comeragh Mountains are located outside of the ZTV and will be entirely screened from the proposed turbines.

A broad network of scenic route designations and static scenic views also traverse the wider Study Area, some of which pass across elevated parts of the uplands and will afford clear views of the proposed turbines from a distance. One of the clearest and most elevated of these views is represented by VP22, which is situated along the scenic route 10 (SR10). Whilst the moving turbine components will likely be noticeable features, even from this distance of over 9km, the proposed development is viewed in the context of a broad sweeping panorama influenced by a range of productive land uses in addition to existing wind energy development. As a result, whilst the proposed turbines will marginally increase the intensity of built development in this view, they are viewed at a considerable viewing distance, present in a legible manner, and will not contribute to a strong detracting in the scenic amenity of this broad sweeping view.

The proposed turbines will be intermittently visible from several other scenic views and scenic routes within the wider Study Area. Nonetheless, the turbines will typically be viewed in the context of the robust foothill landscape east of the principal ridgeline of the Knockmealdown Mountains, and in some cases, the turbines are viewed in the opposite direction to the main aspect of scenic amenity from these routes. The significance of visual impact at all scenic routes and scenic view designations within the Study Area ranges from Moderate to Slight-imperceptible. Thus, impacts at scenic designations within the Study Area are **not considered to be significant**.

#### 11.4.3.2 Visual Impacts on Local Community Views

Local Community views are considered to be those experienced by those people who live, work and move around the area within approximately 5km of the site. These are generally the people most likely to have their visual amenity affected by a wind energy proposal due to proximity to the turbines, a greater potential to view turbines in various directions, or having turbines as a familiar feature of their daily views.

Up to 14 views were chosen to represent the local community, some of which also represent scenic routes, amenity features, and centres of population and include VP7, VP8, VP9, VP11, VP12, VP13, VP14, VP15, VP16, VP17, VP19, VP20, VP21 and VP24. The sensitivity of these views ranges from 'Medium-low' to 'High-medium' with those of a higher sensitivity attributed to the designated scenic routes and/or amenity and heritage features such as the Sean Kelly Cycle routes and Comeragh Mountain Drive. Of the 14 views, the highest significance of visual impact is 'Substantial-moderate', which generally relates to the nearest views afforded of the proposed turbines.

Five views have been classified with a 'Substantial-Moderate' visual impact significance namely viewpoints VP11, VP12, VP14, VP16 and VP17. The highest visual impact of High occurs at VP14, which affords the nearest view of turbines within the Study Area (413m to T04). Whilst this view is representative of the local community, there are no inhabited dwellings in the immediate vicinity of this local road context. The nearest dwellings to the site are represented at VP17, some c.900m south of this viewpoint. VP14 affords a close view of the central and westernmost turbines in the array. The proposed development will have a highly-dominant visual presence along this section of the local road, as the turbines will be visible or partially visible in almost all directions. The scale of the westernmost turbines is also notably accentuated by their uphill orientation, where the turbines generate a slight degree of scale conflict with the nearby dwelling to the west. Nonetheless, it is important to note that this dwelling is uninhabited and will form part of the proposed development. Furthermore, the roadside vegetation will provide some screening of the turbines to the east, whilst the remaining visible turbines generally present in a legible manner.

Viewpoints VP11, VP16 and VP17 all afford locally elevated views of the proposed development. VP11 and VP17 both afford relatively close views of turbines. However, in both instances, the proposed turbines do not block or obstruct the most scenic aspects of these views, which typically relate to elevated views afforded across the wider landscape and uplands to the east and south. VP12 affords a filtered view of the proposed development, where all of the turbines are revealed to varying degrees, but are partially screened by a near mature tree line. Whilst the proposed turbines will be a prominent feature from this local landscape context, they are viewed in a clear and legible manner, with generous spacing characteristics allowing for a sense of visual permeability through the scheme.

Five viewpoints representing the local community were also classified with 'Moderate' visual impact significance. These viewpoints include VP8, VP13, VP19, VP20 and VP21. Viewpoints VP19 and VP20 are also representative of scenic routes in the central Study Area and are described in the section above. VP8 is one of the nearest of these views to the proposed development and is located to the north of Broemountain, some 1.8km from the nearest turbine (T13). The proposed turbines will be prominent features of this view and present uphill along the summit of Broemountain and along its southeastern extents. Nonetheless, the turbines are not viewed in the main aspect of visual amenity here, which is to the east towards broad rolling upland ridges of the Comeragh and Monavullagh Mountains. All other viewpoints representing the local community were classified with a residual visual impact significance of Moderate-slight or lower. This is principally a result of their distance from the proposed development and/or screening located in the direction of the proposed development.

Overall, whilst the turbines will present at a considerable scale from some of the nearest local community receptors, they do not generate any notable sense of over-bearing, nor do they appear out of place in this relatively robust transitional foothill landscape that is influenced by typical foothill land uses such as commercial forestry and agricultural farmland. Thus, it is **not considered that the proposed development will generate significant visual impacts** at local community receptors.

#### 11.4.3.3 Visual Impacts on Centres of Population

Five viewpoints were chosen to represent centres of population within the central and wider Study Area (VP2, VP5, VP13, VP26 and VP29). Centres of population are generally considered to be in the mid to low range of visual receptor sensitivity because they tend to be busy built environments where visual change is relatively commonplace. However, in this instance, some of the centres of population throughout the Study Area are locally elevated

and afford broad panoramic backdrops or are located in highly sensitive landscape areas, such as river valleys or coastal areas, which heighten their sensitivity.

Only one centre of population is located within the central Study Area. The small village of Touraneena is situated to the east of the River Finisk, some 3km east of the nearest proposed turbines. The settlement of Touraneena is represented by viewpoint VP13, where a relatively broad view of the proposed development is afforded along its rolling foothill context. All 13 turbines will be visible from some parts of the settlement due to the elevated location of this village. The proposed turbines will be visible from the settlement at a notable scale from this distance. Nonetheless, the proposed development will present in a highly legible manner from this locally elevated settlement, albeit with some minor negative aesthetics effects. The turbines are afforded generous spacing characteristics and will not block the view of the Knockmealdown Mountains foothills and the wider uplands further to the west.

All other centres of population within the wider Study Area were classified with a visual impact significance of 'Slight-imperceptible', which is principally a consequence of their distance from the site combined with the intervening mature vegetation in the direction of the proposed development. Furthermore, it is important to note that many of the centres of population in the wider Study Area were scoped out as representative viewpoints for assessment as the ZTV identified little or no potential for turbine visibility. As a result of the reasons outlined above, it is **not considered that the proposed development will result in significant visual impacts** at Centres of Population within the Study Area.

#### 11.4.3.4 Visual Impacts on Major Routes

The most notable major routes within the Study Area include the N24 and N25 national primary routes and the N72 national secondary route, all of which are situated in the wider Study Area. As per the ZTV included in Figure 11.9 above, the proposed turbines will not be visible from sections of the N25 within the Study Area. In terms of the N25, there is potential for long distance views of the proposed development from sections of the route in the northern periphery of the Study Area, whilst a brief section of the N72 in the southern half of the Study Area has the potential to afford views of the proposed turbines.

Views from the N25 are represented by VP1, which also represents a scenic view in County Tipperary. A broad long-distance view of the proposed turbines has the potential to be afforded from sections of the N25 northwest of Clonmel and east of Cahir. The turbines will present as small-scale background features and will have little impact on the visual amenity of this busy route. Thus, VP1 was classified with a visual impact significance of 'Slight-imperceptible'. Viewpoint VP27 is representative of the potential turbine visibility along the

N72 in the southern half of the Study Area. Whilst the turbines have the potential to be intermittently visible along sections of this route, they will be viewed in the context of the transitional Knockmealdown Mountains foothills and a notably offset from the upland areas of these mountains. As a result, a visual impact significance of 'Slight' was deemed appropriate for the N72. It is also important to note that the most scenic parts of the N72 within the Study Area relate to the Blackwater River Valley, where the surrounding terrain will entirely screen the proposed turbines.

The nearest major routes to the site include the R671 and R672 regional roads located in the eastern half of the central Study Area. As the R671 regional road is situated in the contained context of the River Finisk valley, it will be heavily screened from the turbines by a combination of terrain and vegetative screening. In contrast, the R672 regional road within the central parts of the Study Area is located along locally elevated terrain. However, a high degree of vegetation occurs along its path within the central Study Area. Nonetheless, clear intermittent views of the proposed turbines have the potential to be afforded from the R672 regional road from a distance of c. 4km from the nearest turbine, as highlighted in VP7. Where visible, turbines will be noticeable features along this section of the R672 and generally tend to present in a highly legible manner with generous spacing characteristics. The proposed turbines also present along the rolling foothills and are well offset from the principal ridgeline of the Knockmealdown Mountains.

As a result of the reasons outlined above, **it is not considered that any significant visual impacts will occur in respect of major route receptors.**

#### 11.4.3.5 Visual Impacts on Amenity and Heritage Features

Ten viewpoints were chosen to represent heritage and amenity features within the Study Area and include VP3, VP4, VP5, VP6, VP7, VP10, VP18, VP22, VP25 and VP28. Many of these also overlap with scenic views, major routes and other visual receptors described above.

Due to the elevated nature of the terrain in the wider study area, many walking and hiking trails have the potential to afford elevated views across the study area and towards the proposed development. Viewpoints from the highest points of the Comeragh and Knockmealdown Mountains have been included to highlight the potential visibility of the proposed turbines from these sensitive landscape and visual receptors. The wider Comeragh Mountains are represented by VP6, situated at Kilclooney Mountain's summit. A broad sweeping panorama of the surrounding landscape in all directions is afforded from here,

where the proposed turbines will be partially visible in the distant background. Due to the considerable viewing distances, the proposed turbines will have a minimal visual presence in this 360-degree panorama. VP6 was classified with a residual visual impact significance of 'Slight-imperceptible'. VP10 is located at the summit of Knockmealdown, where the proposed turbines will be partially screened by the rolling upland hills and ridges in the eastern extents of the Knockmealdown Mountains. Whilst several turbines and turbine blade sets will be partially visible, they are viewed in the context of an extensive panoramic view and will have little notable influence on the visual amenity of this upland setting. Furthermore, views of existing wind energy development are afforded from this elevated location, and therefore the proposed turbines will not appear out of place. Thus, a residual visual impact magnitude of 'Slight-imperceptible' is deemed appropriate from this receptor.

Mount Mellary Abbey is one of the nearest and most notable heritage features to the proposed development. Located along the south-facing foothills of the Knockmealdown Mountains, Mount Mellary Abbey affords broad panoramic views of the southern half of the Study Area. The Abbey is represented by viewpoint VP18, however, it is important to note that this viewpoint is located in the wider eastern half of the Abbey grounds. The main viewing aspect of the Abbey will have no visibility of the proposed development due to a combination of screening from surrounding outbuildings and intervening mature vegetation. Even where briefly visible from the outer periphery of the lands that contain the Abbey, the proposed turbines are only partially visible and will have no notable impact on the visual amenity afforded from here. As a result, VP18 was classified with a residual visual impact of 'Slight'. Other notable heritage and amenity features located in the wider surrounds of the Study Area are represented by VP3 and VP28. VP3 is a representative view from the East Munster Way and is located along elevated lands within the northeastern extents of the Comeragh Mountains. Whilst the proposed development is heavily screened by vegetation in the near foreground of the depicted view, there will likely be clear views of the proposed development afforded from a similar context along this section of the national waymarked trail. The proposed turbines will present as distant background features from here and are considered to have a 'Slight' residual visual impact significance. On the opposite side of the Study Area, VP28 is located east of the Blackwater River valley and is representative of Dromana Demesne and a section of the on-road Sean Kelly Cycle route network. Only the westernmost turbines in the array will be fully revealed from here, whilst partial views of the blade sets of the remaining visible turbines will be viewed rotating along the distant vegetated ridgeline. Overall, VP28 was classified with a residual visual impact of 'Slight' as the proposed turbines are viewed as relatively small-scale features and do not intrude on the most scenic aspects of this view.



As a result of the reasons outlined above, it is **not considered that the proposed development will result in significant visual impacts in respect of heritage and amenity features** within the Study Area.

#### 11.4.3.6 Summary of Visual Impacts

Based on the visual impact assessments outlined in **Sections 11.4.3.1 to 11.4.3.5** above and in **Table 11.9** above, the residual visual impacts range between 'Substantial-moderate' to 'Imperceptible'. The most notable visual impacts occur at local community receptors, which account for all 5 of the 'Substantial-moderate' visual impact significance classifications and principally relate to their close proximity to the proposed development. Nonetheless, in all instances where the proposed turbines are viewed at a close distance, they do not present with any strong sense of overbearing, nor do they appear over-scaled or incongruous in this robust foothill landscape setting that comprises broad landscape features and land uses patterns.

In relation to susceptible scenic designations in the surrounds of the proposed development, the proposed development will be clearly visible from some of the nearest scenic route designations to the site. Nevertheless, the proposed turbines are often viewed in the opposite direction to the main aspect of scenic amenity from these routes and do not block or obstruct other sensitive viewing aspects. Even where clearly visible from some of the highly scenic view designations in the wider surrounds of the Study Area, the proposed turbines appear well accommodated in terms of their scale and function in this foothill landscape and will not result in a notable detracting in the scenic amenity of the wider landscape, which is currently influenced by a range of other anthropogenic land uses including existing wind energy development, major routes and extensive areas of commercial conifer forestry.

Overall, it is not considered that the proposed wind farm development will result in significant visual impacts at any surrounding receptors. Nonetheless, there will be some near-significant residual visual impacts (Substantial-moderate) at the nearest local receptors. Whilst the turbines will be often viewed in the context of some of the sensitive and susceptible upland parts of the Knockmealdown Mountains, there is a strong sense that the turbines are located within the more robust foothill landscape as opposed to the more scenic and naturalistic uplands. Indeed, the proposed development is wholly consistent with the the Draft Wind Energy Development Guidelines 2019 locational guidance for the Transitional Marginal Landscapes landscape type, which states "*wind energy developments might also be located at lower levels in extensive areas of this landscape type, where they will be perceived against a relatively complex backdrop*".

#### 11.4.4 Cumulative Impacts – Existing Baseline

As per **Table 11.8** above, there are 4 operation wind farms and 3 consented wind farms in the study area. **Figure 11.10** below identifies the potential for theoretic visibility between the proposed development and existing or permitted developments within the wider study area. It is important to note that the cumulative ZTVs are based on bare-ground data. Thus, cumulative wind farm visibility is likely to be much less than identified on the ZTV maps. It is also important to note that only one wind farm, a single turbine development, is located within 10km of the proposed Dyrick Hill Wind Farm, which diminishes the potential for any notable cumulative impacts to occur. Nevertheless, despite the limited number of existing/permitted turbines within 10km of the site, the proposed development has relatively limited opportunities to be viewed in isolation, especially in the southern half of the 20km Study Area. The cumulative ZTV highlights that the proposed development has the potential to be viewed in isolation for 18.8% of the study area, much of which is contained in the lowland in the northwest quadrant of the study area. Aside from the northwest quadrant of the study area, some river valley corridors in the near vicinity of the site and sloping hillsides in the surrounds of the northern extent of the Comeragh Mountains also have the potential to afford views of the proposed turbines in isolation.

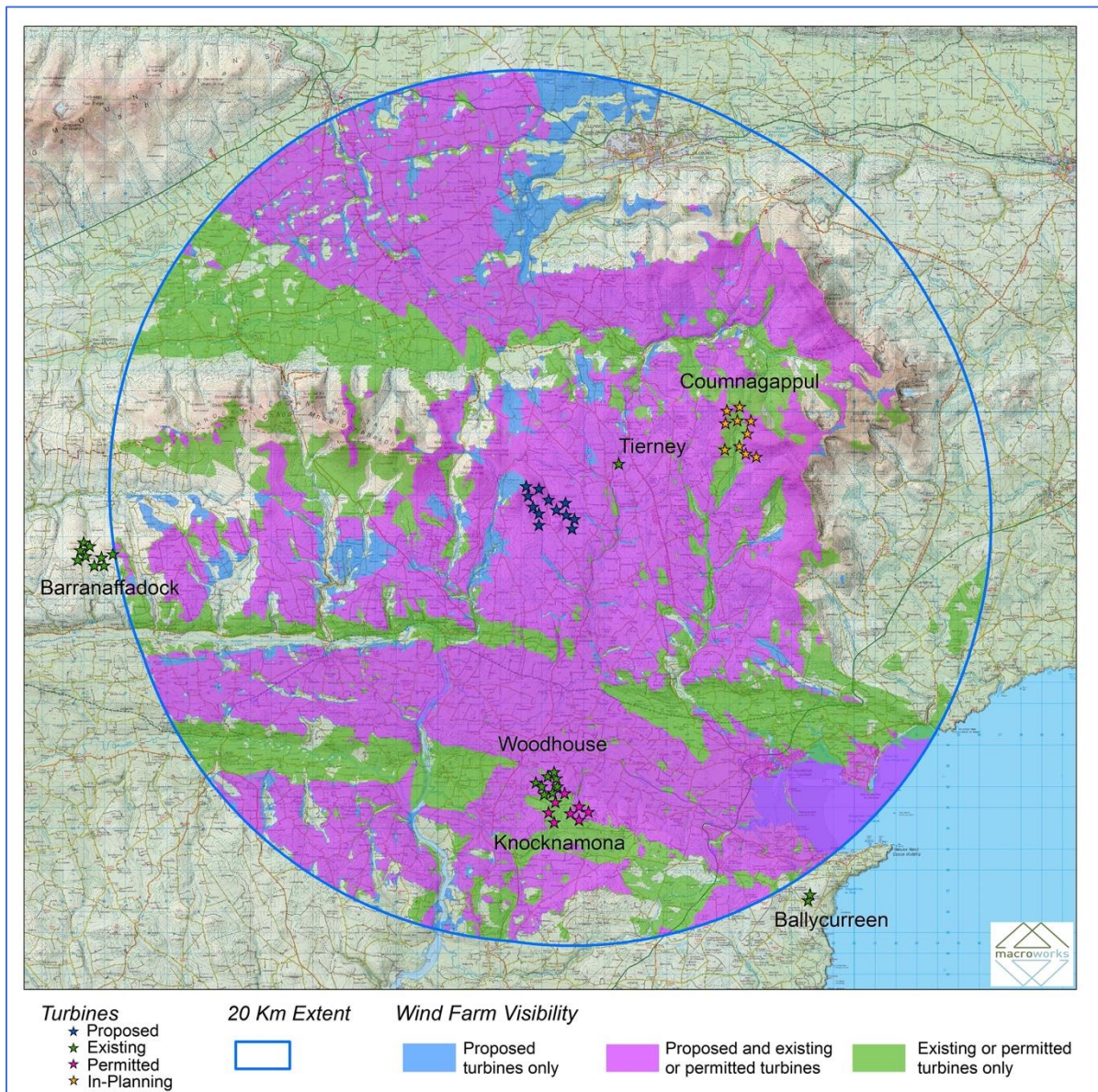
As the majority of existing and permitted developments are contained within the southern half of the study area, the most notable potential for cumulative views of the proposed, permitted and existing developments occurs in the southern half of the 20km Study Area. 31.6% of the study area has the potential to afford views of the proposed development in combination with other consented and existing wind farm development. These areas generally relate to the more elevated lands in the immediate surrounds of the site and the sloping south-facing hills and west-facing hills of the Knockmealedown and Comeragh Mountains, respectively. A broad extent of the lowlands to the east and south of the site, in addition to the elevated lands in the southern periphery of the Study Area, also have the potential to afford views of the proposed, permitted and existing development within the Study Area. Both the settlement of Dungarvan and Lismore have the potential to afford views of the proposed development in combination with other existing and permitted developments, albeit they will generally be viewed with a considerable separation distance. It is also important to note that 36.5% of the study area will still have no visibility of proposed, permitted or existing turbines. Furthermore, this figure is based on bare-ground data and will likely be considerably more once existing vegetation and surrounding built development are considered.

In terms of sequential visual effects, several waymarked walking trails and looped trails, including the East Munster Way, The Blackwater Way and The Nire Valley trails. Aside from

the most elevated parts of the Comeragh and Knockmealeadown Mountains, much of the East Munster Way and Nire Valley trails will only afford visibility of the proposed development in isolation. Similarly, aside from the summits and rolling ridges within the Knockmealedown Mountains, the Blackwater Way only has limited opportunity to afford views of the proposed, permitted and existing development within the study area. Furthermore, the most notable views of turbines along the Blackwater Way within the study area likely relate to the clear views of the existing Barranafaddock Wind Farm, which are a relatively short distance from the alignment of the Blackwater Way. There is also potential for sequential cumulative effects to occur along the N72 and N25 national routes within the study area, much of which relates to cumulative views of the proposed development in combination with existing and permitted development in the wider southern half of the study area. Sequential cumulative views are also likely to occur along the Sean Kelly Cycle Routes and Comeragh Mountain Drive within the central and wider study area.

In respect of cumulative impacts with other forms of development, there are no other notable large scale developments within the vicinity of the Proposed Development.

As a result of the reasons outlined above, the magnitude of cumulative effect in relation wind farms within the 20km Study Area is deemed Low. This is principally a consequence of the limited number of existing/permitted developments within the central Study Area (1 single turbine development) in addition to the considerable offset distance between all other existing and permitted development within the wider study area.



**Figure 11.10: Cumulative ZTV (Zone of Theoretic Visibility) showing the potential for intervisibility of the proposed development and other existing and permitted developments within the study area. (See Volume III for larger scale map)**

### 11.4.5 Cumulative Impacts – Potential Future Baseline

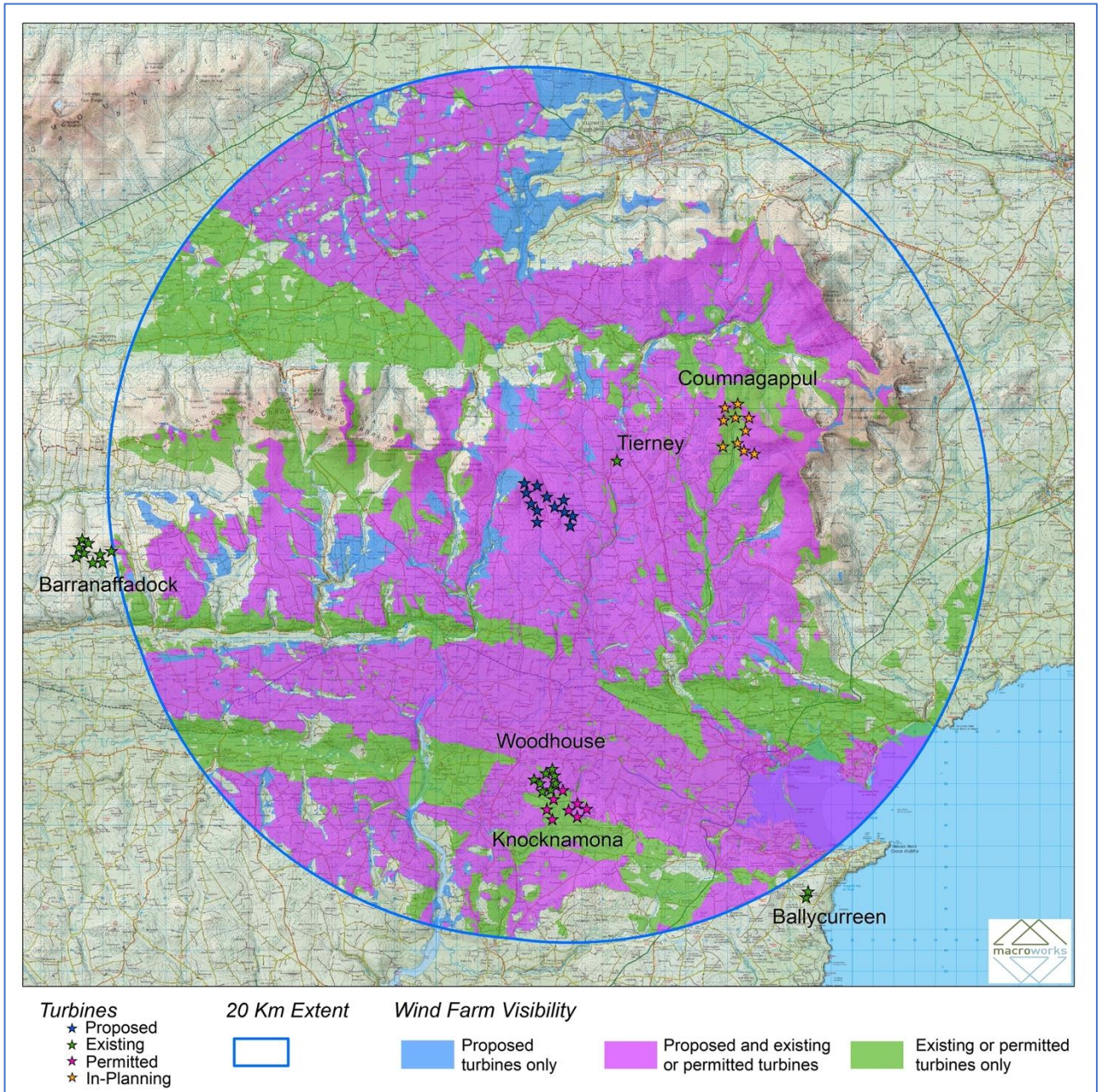
Whilst still at the pre-planning stage, it is important to consider the potential cumulative effects of the proposed development in combination with the proposed Coumnagappul Wind Farm. The proposed Coumnagappul Wind Farm is a development of a similar scale and nature located along the western foothills of the Comeragh Mountains, some 7.1km east of the proposed Dyrick Hill site.

As per the potential future cumulative scenario ZTV (**Figure 11.11** below), the most notable difference between the existing baseline scenario is the reduced potential for the proposed

Dyrick Hill development to be viewed in isolation. In the potential future baseline scenario, only 4.9% of the study area has the potential to afford views of the proposed Dyrick Hill turbines in isolation. These areas are principally contained in the winding valleys to the west of the site and in the lowlands in the northern extents of the study area, west of Clonmel. In addition, any potential for views of the proposed Dyrick Hill turbines in isolation has been eliminated in much of the eastern and southern half of the study area, as the proposed Coumnagappul turbines also have the potential to be viewed from here. As expected, the potential for views of the proposed Dyrick Hill turbines in combination with existing, permitted and other proposed developments has also increased to 45.6% of the study area.

The most notable potential for cumulative impacts in relation to the potential future baseline scenario relates to views of both the proposed Dyrick Hill turbines and Coumnagappul turbines from the lowland landscape between the Knockmealedown Mountain foothills and the Comeragh Mountains foothills to the east of the proposed development. Within this lowland landscape, there is potential to afford views of turbines from local receptors both to the east and west. There will be a notable increase in the intensity of wind farm development in this part of the study area, especially along some of the linear routes that traverse these lowlands (Sean Kelly Cycling Route and The Comeragh Mountain Drive). Due to the slightly contained nature of this lowland landscape which lies between two mountain ranges, there is some potential for the proposed development to generate a slight degree of wind farm proliferation in combination with other existing, permitted and proposed developments. Nevertheless, it is important to note that the proposed Coumnagappul turbines are some 7.1km east of the proposed Dyrick Hill turbines, which helps to diminish any notable adverse cumulative visual effects such as visual staking of turbines and turbine blade sets. Due to this notable separation distance, it is clear that both wind farm developments are distinctly separate.

As a result of the reasons outlined above, the magnitude of cumulative effect of the potential future baseline scenario in relation existing, permitted and proposed wind farms within the 20km Study Area is deemed Medium.



**Figure 11.11: Cumulative ZTV (Zone of Theoretic Visibility) showing the potential for intervisibility of the proposed development and other existing, permitted developments and other proposed development (Coumnagappul Wind Farm) within the study area. (See Volume III for larger scale map)**

### 11.5 MITIGATION MEASURES

Outside of those landscape and visual mitigation measures that formed part of the iterative design process of this Development over a number of years, and which are embedded in the assessed project, other specific landscape and visual mitigation measures are not considered necessary / likely to be effective. Thus, the impacts assessed in **Section 11.4** are the equivalent of residual impacts in this instance.

### **11.5.1 Decommissioning Phase**

The decommissioning phase will see a similar nature of effects to the construction stage due to the movement of heavy machinery within the site and to and from the site removing turbine components. However, such effects will be temporary in duration and decreasing in scale as turbines are removed from view and the landscape is substantially reinstated to former uses. As with construction stage impacts, decommissioning stage effects are not considered to be significant.

### **11.6 SUMMARY OF SIGNIFICANT EFFECTS**

It is not considered that there will be any significant effects on landscape and visual amenity arising from the proposed Dyrick Hill Wind Farm.

### **11.7 STATEMENT OF SIGNIFICANCE**

Based on the landscape, visual and cumulative assessment contained herein, it is considered that there will not be any significant effects arising from the proposed Dyrick Hill Wind farm.

### **11.8 REFERENCES**

1. Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Reports' (2022) and the accompanying 'Advice Notes on Current Practice in the Preparation of Environmental Impact Statements' (2018).
2. Department of Environment Heritage and Local Government (DoEHLG) Wind Energy Planning Guidelines (2006/2019 revision) and Preferred Draft Approach to revising the 2006 Guidance published 2017.
3. Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment (2013).
4. Scottish Natural Heritage (SNH) Guidance Note: 'Assessing the cumulative impact of onshore wind energy developments' (2012).
5. Scottish Natural Heritage (SNH) Siting and Designing Wind Farms in the Landscape Version 3 (2017).