
GORTYRAHILLY WIND DAC

GORT UÍ RAITHILE WIND FARM

CO. CORK

VOLUME I

NON-TECHNICAL SUMMARY (NTS)

August 2022

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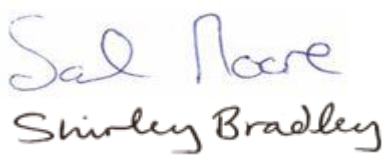

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1 NTS.1 INTRODUCTION

This Non-Technical Summary (NTS) summarises the Environmental Impact Assessment Report (EIAR) which accompanies the application for planning permission for Gortyrhilly (Gort Uí Raithile) Wind Farm which is situated in the townlands of Derree (Na Doirí), Gortyrhilly (Gort Uí Raithile), Rath West (An Ráth Thiar), Derryfineen (Doire Fhínín), Gortnabinna (Gort na Binne), Derragh (Doireach) and Cahernacaha (Cathair na Cáithe), Co. Cork. The site is located approximately 4.3km south-west of Ballyvourney (Baile Bhuirne), Co. Cork and 2km east of the county boundary between Cork and Kerry.

The applicant seeking planning permission is Gortyrhilly Wind DAC, a joint venture between FuturEnergy Ireland and SSE Renewables.

FuturEnergy Ireland (FEI) is the recently launched joint venture company owned on a 50:50 basis by Coillte and ESB. This new business combines the State's strongest assets and expertise in onshore renewable energy development on behalf of the people of Ireland. They are one of the largest dedicated developers of onshore wind in Ireland and their mission is to maximise the potential of our national resources and accelerate Ireland's transformation to a low carbon energy economy.

The aim of FuturEnergy Ireland is to help materially the country deliver on its green energy targets, achieving net zero emissions by 2050, as set out in the Government's Climate Action Plan and legislated for under the Climate Action Act. In this regard, FuturEnergy Ireland is looking to actively drive Ireland's transition to a low carbon economy by developing 1GW of wind energy projects by 2030.

FuturEnergy Ireland is dedicated to developing best-in-class, commercially successful wind farms while maximising the support from local communities. Its wind farm projects have the potential to play a fundamental role in a green economy by creating jobs in rural areas and growing a green industrial sector, while also funding local development for host communities.

SSE Renewables is a leading developer, owner and operator of renewable energy in Ireland. The company's onshore portfolio in Ireland comprises 29 wind farms producing nearly 700MW of renewable generation, including Ireland's largest wind farm the 174 MW Galway Wind Park.

Permission is being sought by the applicant for the construction of 14 No. wind turbines, a meteorological mast, an on-site substation and all ancillary works, works along the turbine delivery route and the construction of an underground Grid Connection to Ballyvouskill 220kV GIS substation, Co. Cork.

The Environmental Impact Assessment Report (EIAR) presents information on the identification and assessment of the potential significant environmental effects of the Development and reports the findings of the Environmental Impact Assessment (EIA) which has been undertaken in accordance with the Planning and Development Act 2000, as amended, and the Planning and Development Regulations 2001, as amended. The EIAR comprises the following documents:

- This Non-Technical Summary (Volume I)
- The Main EIAR Report (Volume II)
- Supporting Figures (Volume III)
- Supporting Appendices (Volume IV)

These documents inform the readers of the nature of the development, likely environmental effects and measures proposed to protect the environment during each phase of the development.

The development will comprise the following phases:

- Construction of the Development
- Operation of the Development
- Decommissioning of the Development

2 NTS.2 ENVIRONMENTAL IMPACT ASSESSMENT

EIA is required where there are likely to be significant effects on the environment due to the nature, size or location of a new development. Wind farms of the scale of the Development typically legally require an EIA to be carried out.

The EIAR has been prepared following a systematic approach to an EIA and project design, with knowledge of the potential effects being used to change the design so as to reduce those effects. The main EIA stages are:

- Scoping consultation (process of asking relevant organisations what they think should be included in the EIA) and how these topics are addressed
- Technical environmental assessments - baseline studies (understanding what the existing environmental conditions are), asking what potential significant environmental effects might occur, informing the design evolution and identification of measures to reduce undesirable effects
- Writing up the findings to include in the EIAR
- Submission of the planning application and EIAR

Scoping and pre-application consultation is important to the development of a comprehensive and balanced EIAR. Requests for Scoping Opinions were submitted to the prescribed bodies and key consultees in November 2020. The request was accompanied by a Scoping Report which described the development, the proposed EIA methodology and the key areas to be 'scoped in' or 'scoped out' of any further assessment. Scoping Opinions received are included as **EIAR Appendix 1.1**. This included agreement on excluding from the EIAR, assessment of effects on certain receptors or features, where it was agreed there was no potential for significant effects.

The project Community Liaison Officer's initial engagement commenced in August 2020 which included direct engagement by calling to all the houses within 2km of the study area and providing information on the proposed development. In 2021, newsletters were distributed to the local community and a meeting was held between the project's lead project manager, Community Liaison Officer, local TDs, and local councillors. In 2022, letters and media release were distributed. The community were invited to engage with the Virtual Tour and Public Consultation Process. The applicant held two rounds of Public Information Days (PIDs) for the Development; a virtual event was held on 21st July and the On-Site Clinic open days were on 26th and 27th July 2022 at Ionadh Áise, Ré na nDoirí, Maigh Chromtha, Co. Chorcaí. The aim of the first round of information days was to invite comments and obtain feedback. The aim of the second round was to present the final design reached following the rigorous EIA process.

Environmental effects have been assessed in chapters of the EIAR, broadly with one chapter per technical discipline, generally representing a type of receptor of potential effects (e.g., birds). The assessments in each chapter follow a similar, systematic approach, to identify any effects that may be significant in the context of the EIA Regulations. The approach includes establishing the "baseline", this being the current state of the environment, to which the development will be added. This identifies the key receptors, including how sensitive they are to the sort of change that might be caused by the development. The potential size (or magnitude) of change caused by the development is then assessed, and the sensitivity and magnitude are considered together to form a conclusion on significance. Effects can be desirable (or "positive", or "beneficial"), or undesirable (or "negative", or "adverse"). Mitigation is proposed where possible to prevent significant undesirable effects. The final, proposed effects are those after mitigation has been applied, and are the "residual effects".

In accordance with the EIA Regulations, the assessment has considered 'cumulative effects'. These are effects that result from cumulative changes caused by past, present or reasonably foreseeable actions together with the development.

3 NTS.3 PROPOSAL FOR THE GORT UÍ RATHILE WIND FARM

The layout of the Development is shown on **Figure NTS-1**. The proposed development will consist of the following:

- Construction of 14 No. wind turbines with an overall ground to blade tip height ranging from 179m to 185m inclusive. The wind turbines will have a rotor diameter ranging from 149m to 155m inclusive and a hub height ranging from 102.5m to 110.5m inclusive.
- Construction of permanent turbine hardstands and turbine foundations.
- Construction of one temporary construction compound with associated temporary site offices, parking areas and security fencing.
- Installation of one (35-year life cycle) meteorological mast with a height of 110m and a 4m lightning pole on top.
- Development of two on-site borrow pits.
- Construction of new permanent internal site access roads, upgrade of existing internal site access roads and upgrading of the L-34011-20 road (which forms part of the Beara-Breifne Way) and lies within the site, to include passing bays and all associated drainage infrastructure.
- Development of an internal site drainage network and sediment control systems.
- Construction of 1 no. permanent 110 kV electrical substation including 2 no. control buildings with welfare facilities, all associated electrical plant and equipment, security fencing and gates, all associated underground cabling, wastewater holding tank, and all ancillary structures and works.
- All associated underground electrical and communications cabling connecting the wind turbines to the wind farm substation.
- Ancillary forestry felling to facilitate construction of the development.
- All works associated with the permanent connection of the wind farm to the national electricity grid comprising a 110 kV underground cable in permanent cable ducts from the proposed, permanent, on-site substation, in the townland of Gortyrhilly (Gort Uí Raithile) and onto the townlands of Derree (Na Doirí), Derreenaculling (Doire an Chuilinn), Lumnagh Beg (An Lománach Bheag), Lumnagh More (An Lománach Mhór), Scrahanagown (Screathan na nGamhan), Bardinch (Barr d'Ínse), Milleeny (Na Millíní), Inchamore (An Inse Mhór), Derreenaling (An Doirín Álainn), Derryreag (Doire Aimhréidh), Cummeenavrick (Coimín an Bhroic), Glashacormick (Glaise Chormaic), Clydaghroe (An Chlaoideach Rua) and Cummeennabuddoge (Coimín na Bodóige) to the existing Ballyvouskill (Baile Uascail) 220 kV Substation in the townland of Caherdowney (Cathair Dhúnaigh).
- All associated site development works including berms, landscaping, and soil excavation.

- Improvement of an entrance to an existing private road off the L-7405-0 local road to include localised widening of the road and creation of a splayed entrance to facilitate the delivery of abnormal loads and turbine component deliveries.
- Improvement of an existing site entrance off the L-3402-36 local road to include removal of existing vegetation for visibility splays to facilitate the use of it for the delivery of construction materials to the site.
- Upgrade works on the turbine delivery route to include the following:
 - Construction of a temporary bridge over the Sullane River (Abha an tSuláin) to allow access to the L-3400-79 from the N22 in Ballyvourney (Baile Bhuirne) for the duration of the construction works.
 - Localised widening of the L-3405-0 road to a width of 4.5m, from the junction with the L3400-79 road to the junction with the L-7405-0 road.
 - Localised widening of the L-7405-0 road to a width of 4.5m, from the junction with the L-3405-0 to the entrance to an existing private road off the L-7405-0.
 - The construction of a temporary access road off the N22 in the townland of Cummeenavrick (Coimín an Bhroic) to facilitate a 180 degrees turning manoeuvre by the turbine delivery vehicles.

A 10-year planning permission and 35-year operational life from the date of commissioning of the entire wind farm is being sought. This reflects the lifespan of modern-day turbines.

A permanent planning permission is being sought for the grid connection and substation as these will become an asset of the national grid under the management of EirGrid and will remain in place upon decommissioning of the wind farm.

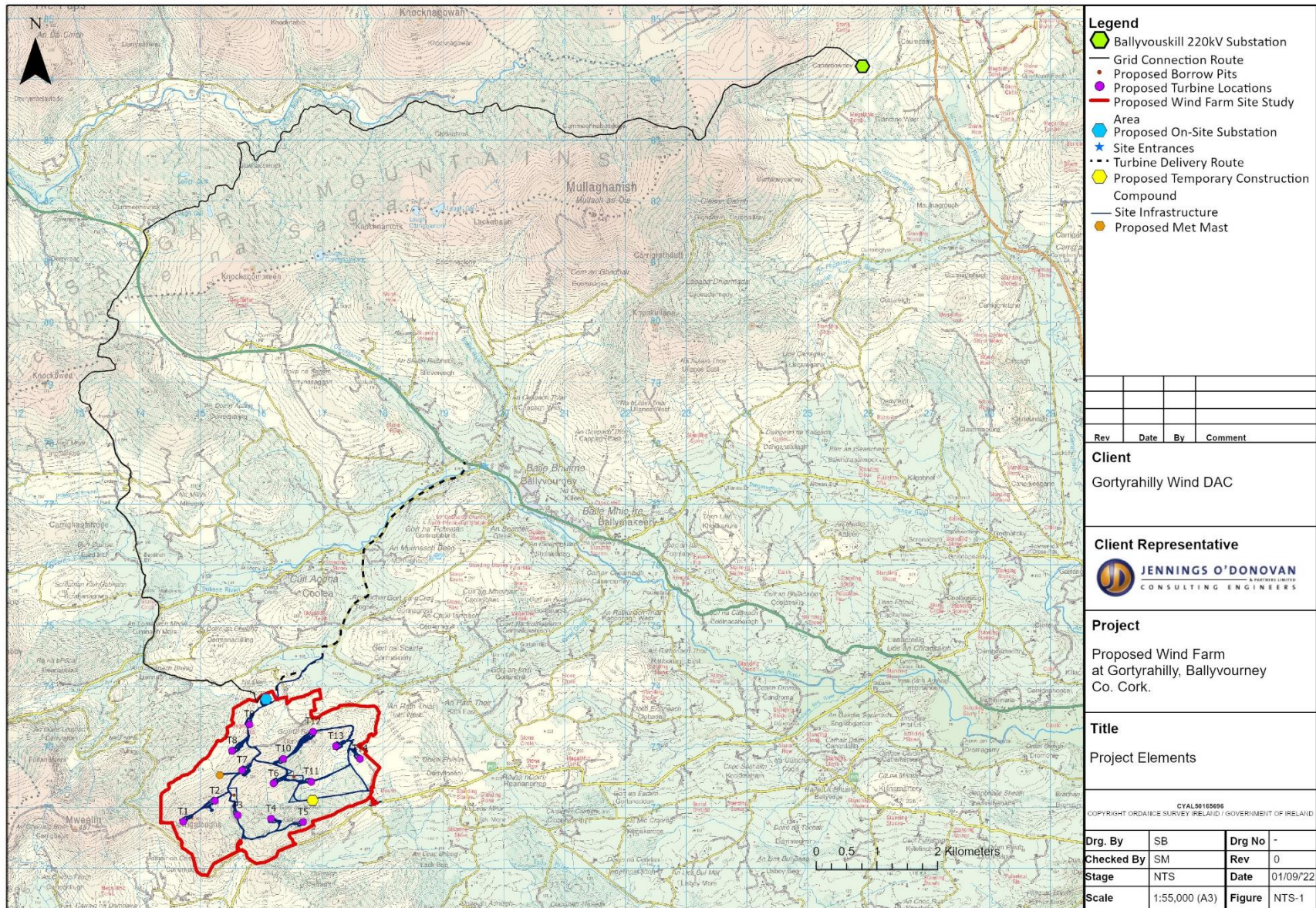


Figure NTS-1 Project Elements

3.1 Wind Turbines

The 14 No. turbines will have a height from base to tip ranging from 179m to 185m inclusive, but the specific make and model is not yet fixed. The turbines will be of a typical modern, three blade, horizontal axis design, white or light grey in colour and the finish of the tower and blades will be semi-gloss and semi-matt respectively.

The final choice of turbines will be guided by an assessment of the wind conditions and will take account of the available technology at the time of construction. It is likely that turbines with 5.6 to 6.6 MW capacity may be available at the size proposed. For the purposes of the assessments, a range of turbine parameters has been assessed as can be seen in **Table 3.1**.

Table 3.1: Turbine Parameters assessed

| Turbine Parameter | Assessment Envelope |
|--------------------------|---------------------|
| Turbine Blade Tip Height | 179m to 185m |
| Rotor Diameter | 149m to 155m |
| Hub Height | 102.5 to 110.5m |
| Output | 5.6 to 6.6MW |

Turbines are typically of a variable speed type, so that turbine rotor speed will vary according to the energy available in the wind. Turbines of the size proposed typically have a rotational speed of between 11.2 and 12.6 times per minute, depending on variations in wind speed, generating power for all wind speeds between c. 4 metres per second (m/s) (approximately 8 miles per hour) and c. 25m/s (approximately 50 miles per hour). At wind speeds greater than c. 25m/s, which are very unusual, the turbines will temporarily turn off to prevent any damage occurring.

The turbines are computer controlled to ensure that at all times, the turbine faces directly into the wind to ensure optimum efficiency. The rotors of all turbines will rotate in the same direction relative to the wind direction.

Each wind turbine needs an area of compacted stone adjacent to the turbine base, known as a hardstanding. This is used principally by the crane when erecting the turbine.

3.2 Access to the Development

The Development will be accessed via the existing and newly proposed Site Access Roads. There are two proposed site entrances. Site Entrance 1 is an existing site entrance to the north of the Site located off a private access road. Site entrance 2 is an existing Coillte site entrance located in the south-east of the Site off the L-3402. The Turbine Delivery Route will utilise Site Entrance 1 and the Construction Haul Route will utilise Site Entrance 2. This is to aid with traffic management. The site entrances are shown on **Figure NTS-1**.

It is proposed that the turbine nacelles, tower hubs and rotor blades will arrive in Ringaskiddy Port, Co. Cork. From there, they will be transported to the Site via the N28, N40, N22, L-3400-79, L-3405-0, L-7405-0 and an upgraded private road as shown on **Figure NTS-1**. A temporary bridge over the Sullane River will allow access of the abnormal load delivery vehicles. The potential effects of transporting them and other materials is set out in section **NTS-14** and **EIAR Chapter 15: Traffic and Transportation**.

The existing Site Access Roads in the forestry will be kept, utilised and upgraded as necessary to access the proposed turbine locations. There will be 11.3km of new site access roads required to allow access within the site. These site access roads will be retained throughout the operational life of the development to enable maintenance of the turbines and replacement of any turbine components.

3.3 Grid Connection

Underground cabling will link the turbine transformers to the proposed onsite substation. This will provide a connection point between the wind farm and the grid connection point at the existing Ballyvouskill Substation. The overall length of the underground grid connection between the onsite substation and the existing Ballyvouskill substation is 27.8km. This will be located along public roads, forestry roads and third-party lands. The grid connection route can be seen in **Figure NTS-1**.

3.4 Construction Phase

The construction phase of the Development will take approximately 21 months in total. In general, working hours for construction activity will be from 07:00 to 19:00 throughout the week, with reduced working hours at weekends.

The turbines will be located across a wide area of hillside, however the land taken by the turbines and other infrastructure is a very small proportion of this, and substantial efforts have been made to re-use existing infrastructure rather than using new land. During the construction

phase, the total land-take required for the development will be 215 ha with the total extent of the site reaching 667 ha.

The applicant will appoint a Civil Contractor who will have overall responsibility for management, including environmental management on the construction site. The Civil Contractor will ensure that construction activities are carried out in accordance with the mitigation measures outlined in the EIAR and as required by the planning permission, such as the Construction Environmental Management Plan (CEMP) included in **EIAR Appendix 2.1**. The services of specialist advisors will be retained as appropriate, such as an archaeologist and ecologist, to be called on as required to advise on specific environmental issues.

3.5 Site Restoration

A Habitat Enhancement Plan, included as **EIAR Appendix 6.1**, has been prepared to mitigate for the ecological effect of habitat loss as a result of the project. The Plan is focused on the restoration of blanket bog and heath in a sector of the site where afforestation will take place (see **Figure NTS-2**). Restoration will be undertaken at the earliest opportunity to minimise storage of turf and other materials.

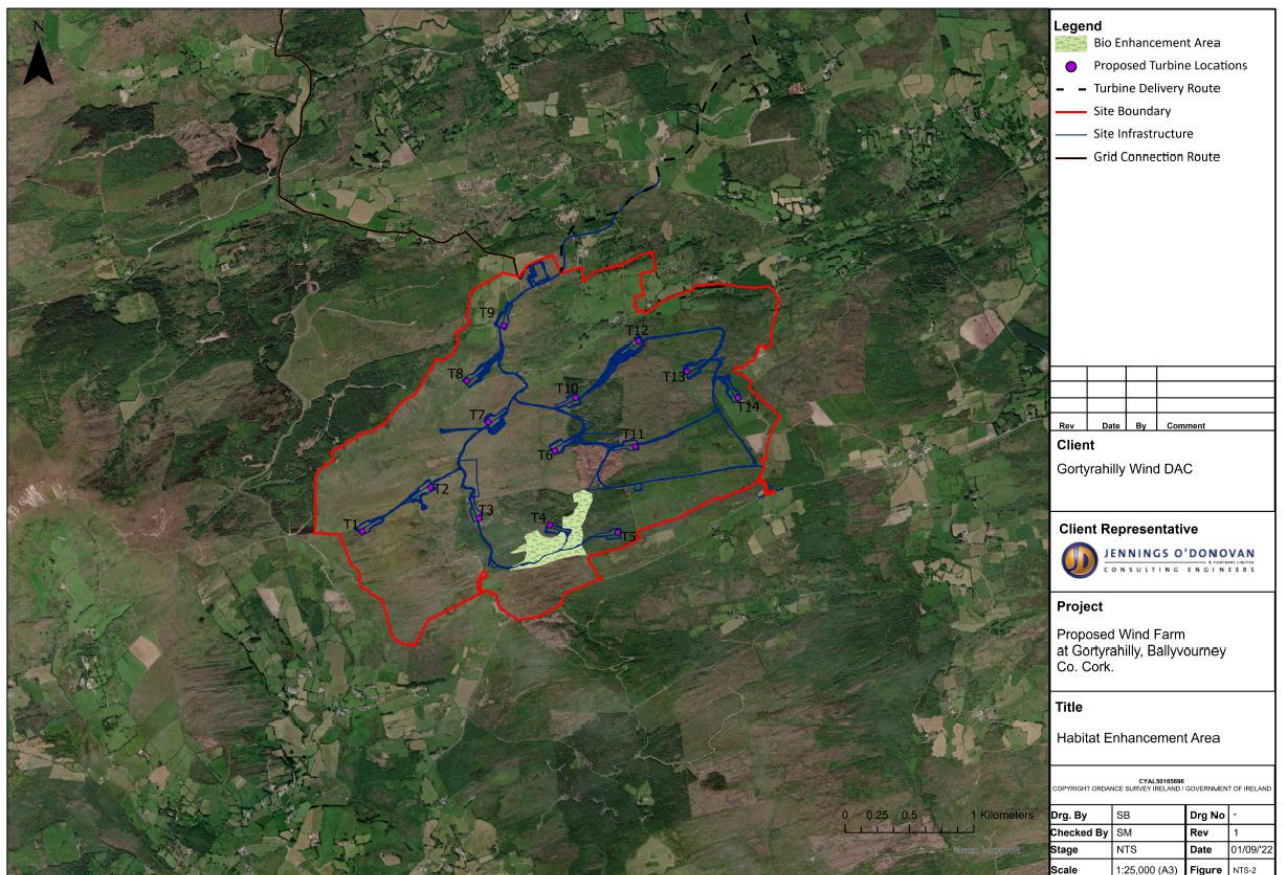


Figure NTS-2 Habitat Enhancement Area

3.6 Operational Phase

The operational lifespan for the development is 35-years. During the operational phase of the development, turbine and infrastructure maintenance will be ongoing and regular. This is expected to continue to employ approximately 2 people on a permanent basis for regular operational and maintenance activities. In addition to this, employment will be created in the areas of finance, ongoing compliance with permissions and permits, safety, security, community relations and benefits and land-owner agreements.

4 NTS.4 SITE SELECTION AND DESIGN

The site layout design has evolved through a series of changes, to avoid or minimise potential effects, including effects on views, hydrology, peat, ecology, fisheries, ornithology, noise and archaeological features. Technical criteria such as wind speed, prevailing wind direction, existing infrastructure, topography and ground conditions were considered during the design process, in response to guidance documents, survey findings and responses from consultees. Overall, it is considered that the proposal represents an optimum fit within the technical and environmental parameters of the project.

5 NTS.5 LEGAL AND POLICY FRAMEWORK

Development has had regard to the National Planning Framework, the Regional Spatial and Economic Strategy (RSES) for the Southern Region and the Cork County Development Plan 2022-2028. These documents are relevant to the determination of the planning application by An Bord Pleanála. A detailed assessment of the Planning Policy and Legislative Framework is provided in the **Planning Statement** which accompanies the planning application.

The Climate Action Plan 2021 set out ambitious and legally binding targets for Ireland. The goal is that Ireland will achieve net-zero greenhouse gas emissions no later than 2050 and a reduction of 51% by 2030. The Development will contribute towards meeting those targets.

6 NTS.6 POPULATION AND HUMAN HEALTH

The potential effects of the construction and operation phases of the Development on socio-economics, tourism and recreation and land use were identified and assessed in **EIAR Chapter 4** following desk-based collection of data and consultation with local stakeholders. Three geographical Study Areas were outlined for this assessment, namely:

Study Area 1: The Site and Environs [District Electoral Divisions (DEDs) - Derryfineen (Doire Fhíniín), Gortnatubbrid (Gort na Tiobraid) and Cleanrath (Claonráth)]

- Study Area 2: Cork County
- Study Area 3: Kerry County

Overall effects of the development with regards to tourism are considered to be short-term, slight, negative during both construction and decommissioning phases due to temporary closures and diversions of walking and cycling routes. There will be a long-term, slight positive impact during operation due to improved tracks, information boards and waymarking.

The majority of existing land use is agriculture and/or commercial forestry. This will not be altered significantly by the construction, operation and decommissioning of the development as these activities can continue alongside the development.

The Beara to Breifne Way traverses the site and is fully accessible to the public. These trails will be upgraded in sections as part of the development which will encourage and benefit walkers and cyclists. This is an amenity benefit that will continue during the operation of the wind farm. The development will contribute to the offset of burning of fossil fuels which has the potential to positively impact human health.

In advance of the construction phase, the applicant will hold a series of 'Meet the developer / Contractor' events as early as possible, allowing local contractors to learn about opportunities to bid for contracts, time to upskill, and time to prepare prior to bidding. The applicant has significant experience in organising these events.

Effects on the economy during both the construction phase and the operational phase would be minor, both direct and indirect, and positive, due to the creation of job opportunities and subsequent spending of income in the local area and within Ireland as a whole. It is estimated that turnover generated by the operation and maintenance of the development could directly support two jobs in County Cork. The overall impact is predicted to be a moderate, positive, short-term impact during the construction and decommissioning phases and moderate, positive and long-term during the operational phase.

Cumulatively, together with other proposed wind farm developments in the region, if these are progressed, the effects would be positive and of minor significance. There is predicted to be a short-term, positive impact in terms of employment from the development, if construction periods overlap.

6.1 Shadow Flicker

Chapter 4 contains a Shadow Flicker analysis. Shadow Flicker is the effect of light levels in a sunlit room noticeably varying as a result of the shadow of a turbine blade passing a window, causing a nuisance. Industry standard software was used to model the potential for shadow flicker to occur, based on the proposed turbine locations and dimensions and the locations of

residential properties. The defined study area was based on the 2006 Wind Energy Development Guidelines which is for properties within 10 rotor diameters (assumed at 1,550 metres as a worst-case scenario and 2,000 metres for completeness).

The adopted 2006 DoEHLG guidelines are currently under review. The assessment is based on compliance with the current DoEHLG Guidelines limit (30 hours per year or 30 minutes per day). The revised draft of the Wind Energy Development Guidelines 2019 provides for zero shadow flicker. However, it should also be noted the Development can be brought in line with the requirements of the 2019 draft guidelines, should they be adopted while this application is in the planning system.

A significant minimum separation distance from all occupied dwellings of 750m has been achieved with the project design. There are 16 No. occupied dwellings within 1km of any proposed wind turbine location. This assessment has identified the potential for shadow flicker to affect between 84 No. and 89 No. out of 106 No. receptors within the shadow flicker study area.

Where significant shadow flicker effects are predicted to affect a sensitive receptor, these can be mitigated by adapting turbine control systems to stop the offending turbine when shadow flicker conditions are present. In this instance, it is proposed that a shadow control system be installed to eliminate the potential for shadow flicker from the development.

The assessment showed 20 houses will be impacted by Derragh (Doireach) Wind Farm and not the Development. There are ten receptors (H1, H4, H6, H7, H10, H25, H30, H50, H51 and H61) that will be affected by cumulative shadow flicker effects. The installation of a blade shadow control system on all wind turbines will eliminate shadow flicker impacts from the development, therefore, removing cumulative shadow flicker impacts.

The assessment has not identified any likely significant effects from the development on population and human health.

7 NTS.7 BIODIVERSITY

EIAR Chapters 5, 6 and 7 assesses the potential impact of the development on terrestrial ecology, aquatic ecology and ornithology; respectively. Surveys were undertaken within and adjacent to the site, in order to ascertain the status of ecological features, including habitats, terrestrial mammals, bats, fish and aquatic invertebrates (notably freshwater pearl mussel). The nearest designated Natural Heritage Area to the Gortyrhilly (Gort Uí Raithile) wind site is Sillahertane Bog NHA, which is approximately 2 km to the west. The development is also

proximal to European Sites, the nearest of these sites, St. Gobnet's Wood (Coill Ghobnatan Naofa) is approximately 3.7km from the project site.

The main potential impacts of the construction, and operational phases of the development on ecology are considered to be:

- Direct loss of habitat
- Degradation of terrestrial habitat
- Degradation of aquatic habitat (watercourses) and potential downstream ecological impacts
- Disturbance of protected species
- Bat collision with turbines or barotrauma

Habitat surveys included general mapping and quadrat surveys, aimed at identifying important habitat types, including EU Habitats Directive Annex I habitats, either likely to fall under the footprint of the Development or with potential to be affected by it. The results of the survey highlighted that Annex I habitats occurred close to, or immediately adjacent to the proposed infrastructure (Northern Atlantic wet heaths, European dry heaths, Blanket bog, Siliceous rocky slopes with chasmophytic vegetation and Oak-birch-holly woodland). Loss of Annex I habitats is therefore unavoidable.

A freshwater pearl mussel survey was undertaken along watercourses downstream of the development. No populations of freshwater pearl mussel were recorded at the time of surveying.

Transects through bat favourable habitats within the proposed Gortyrhilly (Gort Uí Raithile) wind farm were either walked or surveyed from a vehicle driven with a detector mounted on the hedge-side of the vehicle. Bat activity was recorded using an Anabat Walkabout detector. Transects were undertaken once a month between May to September 2019. Results showed that the site is used by bats but that bat collision or barotrauma risk is not significant at the site.

Surveys for protected mammals found that whilst no signs of badger presence were found on site during the baseline surveys in 2021, their presence within the afforested areas of the site is possible. Otters are not expected to occur on site but are known to be present within the river systems to which the site drains. The common lizard was recorded in June 2021 on a rock outcrop within the site and is expected to occur at low densities throughout.

A number of mitigation measures are proposed that include minimisation of the works footprint, measures to time specific works to avoid disturbance or potential direct mortality of species

(such as common lizard), measures to avoid downstream pollution, as well as habitat restoration and enhancement measures. Important documents in the delivery of these are a Construction Environmental Management Plan (which sets out work approaches and requirements during construction to avoid downstream water quality impacts). A Surface Water Management Plan is also required in order to ensure no long-term impacts on water quality within the freshwater pearl mussel catchment.

The proposed wind farm project will result in the loss of 28 ha of wet heath, which includes areas of dry heath, outcropping silicious rock and some blanket bog (all Annex I listed habitats) – this effect is considered Significant and of Permanent duration. With implementation of mitigation as described in this report, the significance of the effect can be reduced to moderate or slight.

8 NTS.8 ORNITHOLOGY

Chapter 7 of the EIAR assesses the potential effects of the development on ornithology. The construction, operational and decommissioning phases of the development, have the potential to result in three main effects on birds:

- Habitat loss
- Collision with turbines
- Displacement

A qualified ornithologist undertook bird surveys to record data to establish the site baseline, the distribution, and abundance of bird populations around the site, including review of any surrounding designated sites for the wider hinterland up to 10 km. The site is not located within a protected area for birds.

These surveys followed widely recognised best practice guidance on the methods, timings and species that are recorded. This information was used to inform the design of the wind farm layout and the assessment of potential effects. This design is predicted to limit the potential for direct effects for most bird species from habitat loss and collision.

With mitigation measures as presented in this report implemented in full, and specifically construction phase mitigation for breeding birds of peatland habitats, as well as measures for White-tailed Eagle and Kestrel (as required) during operation phase, it is considered that the significance of the predicted effect on birds as a result of the development will be slight.

The implementation of a Construction Management Strategy is considered sufficient to reduce the level of any potential effects to levels that are considered to be not significant, while

providing wide ranging benefits to species found on the site. There are considered to be no specific cumulative operational effects on individual species or territories as a result of the development. The ornithological assessment is based upon the observed field data and findings, published information and research and best practice guidance. Overall, it is considered that the significance of the predicted effects on birds as a result of the proposed Development will range from Imperceptible to Moderate.

9 NTS.9 HYDROLOGY, GEOLOGY AND THE WATER ENVIRONMENT

Chapters 8 and 9 of the EIAR evaluates the effects of the Development arising from the construction, operational and decommissioning phases on the hydrology, hydrogeology and geology resource within and surrounding the site. The hydrological, hydrogeological and geological assessment for the Development was based on desk studies and site surveys.

The desk study assessment included consultation with the following organisations via online map viewers and databases:

- Environmental Protection Agency (EPA) (Republic of Ireland)
- Geological Survey of Ireland (GSI)
- Met Éireann (MET)
- National Parks & Wildlife Services (NPWS)
- Office of Public Works (OPW)
- The National Biodiversity Data Centre (NBDC)
- Water Framework Directive (WFD)

The site is not positioned within or directly adjacent to or immediately upstream of any designated or protected area (SPA, SAC, NHA). Associated designated areas downstream of the site include: Lough Allua (Locha Lua) Proposed NHA (EPA Site Code: 001065) (approx. 4km south), the Gearagh SAC (EPA/NPWS Site Code: 000108), Gearagh SPA (EPA/NPWS Site Code: 00409), The Gearagh NHA (EPA/NPWS Site Code: 000108), Gearagh Nature Reserve and Gearagh Biogenetic Reserve (NPWS, 2022) (all approx. 12km east), and Cork Harbour SPA (EPA/NPWS Site Code: 004030) (approx. 66km east). Furthermore, the WFD status of the surface water network associated with the site ranges from Good to High and is considered highly sensitive in general.

A Flood Risk Assessment (Stage 1) was carried out and indicates that the estimated net increase of surface water runoff (0.66% relative to the area of the site) is imperceptible, in turn the risk of increased flood risk arising as a product of the development is imperceptible.

There are no mapped wells, springs or boreholes within the site boundary. Furthermore, potential for any non-mapped wells being impacted by the development is low considering the

groundwater aquifers in the region are mapped as being Poor Aquifer (PI) (northern portion), that is; bedrock which is generally unproductive except for local zones, and Locally Important Aquifer (LI) (southern portion), that is; bedrock which is moderately productive only in local zones

Peat depth was measured at a total of 378 locations during soil surveys, which indicated that peat within the study area is generally shallow, particularly at higher elevations. Isolated minor pockets of deeper peat are observed at some locations, particularly within troughs in areas of complex topography

A Slope Stability Risk Assessment was carried out and indicates that the risk of significant mass movement of soils or landslides occurring is Very Low to Low within the footprint of the Development. However, an assessment of the peat quality indicates that there remains the potential for peat stability issues to arise at a localised scale, for example, point locations associated with deeper peat and/or steeper inclines and/or close proximity to sensitive receptors.

Standard, good-practice measures will be implemented to minimise the potential for effects such as pollution, erosion or changes to groundwater and surface water flows at the Development to occur. These established and effective measures are described in **Chapter 8: Soil and Geology – Section 8.5 Mitigation Measures and Residual Effects** and **Chapter 9: Hydrology and Hydrogeology – Section 9.5 Mitigation Measures and Residual Effects** and will be included in detail in the Construction Environmental Management Plan (**EIAR Appendix 2.1**) which the applicant will be committed to undertake through conditions of the planning consent.

With mitigation measures in place, the development has been assessed as having the potential to result in effects of varying significance, however many are considered avoidable with the exception of the following unavoidable effects:

- There will be a change in ground conditions at the site with the replacement of natural materials such as peat, subsoil and bedrock by concrete, subgrade and surfacing materials. This is a localised, negative, moderate significance at a local scale, Imperceptible weighted significance at the scale of the site, direct permanent change to the materials composition at the site.
- Excavation works during the construction phase of the development can lead to elevated levels of solid material (soils/grit) being suspended in surface water runoff from the site. While some level of suspended solids in runoff is unavoidable, if precautionary and mitigation measures described in this report are implemented, concentrations of

suspended solids can be reduced to acceptable levels prior to runoff being intercepted by the surface water network associated with the site. Achieving this implies minimal effects on surface water features, this is considered a likely, neutral to negative, imperceptible to slight significance, Imperceptible weighted significance, transboundary impact of the development which conforms to baseline (when considering areas of peat cutting).

- There will be some local changes to how water flows at the site, this is considered a likely, neutral to negative, slight to moderate significance, localised impact of the development which conforms to baseline.

Other potential effects have the potential to be significantly adverse, for example, a significant fuel spill, however applying the precautionary principal, mitigation measures, and proper planning, the likelihood and significance of such potential effects can be dramatically reduced.

None of the proposed turbines or turbine hardstand areas fall within a buffer zone associated with a mapped stream / river. Given the extensive drainage network existing at the site the construction activities associated with the development will invariably be in close proximity to surface water / drainage features, including within the buffer zones such that there will be a requirement for further mitigation measures. Special attention and planning are required for construction activities within surface water buffer zones. Procedures in relation to mitigating against adverse impacts in areas in close proximity to surface water / drainage or within buffer zones are detailed in a Surface Water Management Plan (SWMP).

During the construction, operational and decommissioning phases of the development, a number of established good practice measures will be put in place to minimise peat disturbance, peat stability, and loss and compaction of soils. With effective and well managed mitigation measures in place, no significant residual effects on geology and peat are predicted as a result of the Development.

10 NTS.10 AIR AND CLIMATE

This section assessed the effect of the Development on air quality, given the potential for dust emissions, and the likely carbon dioxide reduction effects of the Development in operation. Mitigation measures for the reduction of dust are outlined in the **EIAR Chapter 10: Air and Climate** Section 10.3.7. All turbines are situated greater than 750m away from inhabited dwelling houses. After mitigation, the residual effects were assessed as having the potential to result in a short-term imperceptible, negative impact on climate during construction. There will be long-term moderate, positive impact on climate as a result of reduced greenhouse gas emission during the operational phase.

The layout of the Development has been designed to minimise the potential environmental effects of the wind farm while utilising the maximum energy yield from the site's wind resource. The selection of breaking new ground and impacting on natural habitat has been kept to a minimum.

The Development does not contain any element, which will produce GHG emissions or odorous emissions in operation. Indeed, the Development will contribute to a net national reduction in the emissions of greenhouse and other gases resulting from the combustion of fossil fuels.

Savings of carbon dioxide arise principally from the generation of electricity from the Development, such that generation from other sources (which emit carbon dioxide) are offset. The estimated savings depend on the assumption of which source of electricity is displaced and the savings range from 87,977 to 103,687 tonnes of carbon dioxide per annum.

Ireland has set a target to achieve a 51% reduction in overall greenhouse gas emissions by 2030, setting a path to reach net-zero emissions by no later than 2050. The target for 2030 is to generate 80% of the country's electricity from renewable sources. The Development will contribute between 78.4 MW and 92.4 MW of installed capacity. The cumulative effect with other Irish renewable generation is considered to be a fundamental change in the climate effects of Ireland's energy supply, which is a major, positive effect, that is significant under the EIA Regulations and will contribute to Ireland's binding emission reduction targets. The Development has been assessed as having a slight, positive, long-term effect in terms of helping Ireland meet its international obligations to reduce GHG emissions.

11 NTS.10 NOISE

Chapter 11 of the EIAR presents an assessment of the noise effects of the development.

Noise will be emitted temporarily by equipment and vehicles used during the construction phase. The main noise sources will be associated with the construction of the turbine foundations, turbine hardstands, grid connection, processing in the borrow pit locations, with lesser sources being site access roads and construction of a 110kV substation. Decommissioning noise levels are assumed to be in the same order as construction levels and will be of temporary duration. Construction and decommissioning works will typically be more than 750m from the nearest property (noise receptor), making the potential for noise and vibration impacts considered to be not significant.

The main sound heard from wind turbines is the 'swish' from the movement of the blades through the air. Modern turbines are designed to minimise noise and planning conditions are used to ensure compliance with specified noise limits. The assessment of operational noise has been undertaken in accordance with best practice and following the latest guidelines. It has been shown that noise due to the Development, including cumulative effects with operational and consented wind farms will meet all current guidelines at all local properties.

12 NTS.11 LANDSCAPE AND VISUAL

Chapter 12 of the EIAR presents a Landscape and Visual Impact Assessment for the Development. This has been carried out by a qualified and experienced landscape architect to identify significant effects predicted to arise as a result of the Development. It considers separately the effects on landscape and visual receptors, as well as the cumulative effect of the Development in combination with other wind farm developments.

The Site is located within an agricultural and forested landscape. Landform within the site is notably upland and sloping, with considerable variance in elevation, although most of the site rests above the 300m AOD mark. Terrain is broadly angled in a north-east to south-west direction, within the site peaking at Carrigalougha (Carraig an Locha) in the south-west at 423m AOD, with the lowest terrain of the site dropping to approx. 220m AOD, along the eastern boundary of the site. The central study area is characterised by mountains and hillsides with relatively narrow, visually enclosed valleys between these elevations. Within 2km west of the Gortyrhilly (Gort Uí Raithile) site is Mweelin (Maoileann) (487m AOD), while to the north are the lower slopes of the Derrynasaggart (Doire na Sagart) Mountains. However, landform to the south, south-east, east and north-east tends to be lower than 300m AOD, particularly along the wider, U-shaped valley carved out by the Sullane (Sulán) River. In the north of the central study area are the Sullane (Abha an tSuláin), Owengarve (An Abha Gharbh) and Aughaboy (An Abha Bhuí) rivers, while to the south are the Áth na Cinníochta stream and the Abha Bhun Sílinn river.

The Study Area for the Development covers a radius of 20 km in accordance with the Wind Energy Development Guidelines (2006). The landscape assessment considers potential effects on the receiving and surrounding landscape with reference to a range of landscape character areas (LCAs) and criteria published in various technical documents. The visual assessment considers effects upon visual receptors (as agreed with consultees through the EIA Scoping process) including scenic amenity designations, centres of population, transport routes and local community views using 30 viewpoints from representative / sensitive visual receptor locations. Photomontages have been prepared for the viewpoints and the figures also

include a wireline of the Development on its own and a wireline with all other cumulative developments.

In respect of landscape sensitivity designations, the Site straddles the junction of three Landscape Character Types identified in the Cork Development Plan, which emphasises why this area is considered to be a transitional landscape generally. Two of the identified landscape character types are classified as having 'High' value and 'High' sensitivity, but only with a 'Local' level of importance. Whereas the other relevant character type is assigned Medium value and sensitivity and also a 'Local' level of importance. Notably, none of these Landscape Character Types is considered to achieve the separate and distinct status of a High Value Landscape (HVL). These scenic amenity classifications highlight that the zone is relatively evenly balanced between productivity and sustaining the rural lifestyle in this area as well as a sense of remoteness and tranquillity and a rugged sense of scenic amenity.

In terms of landscape effects, there will be physical impacts on the land cover of this already modified Site during the construction stage, but many of these will be reversible upon decommissioning of the site. The main landscape impacts relate to changes in landscape character during the operational stage principally from the presence of the proposed turbines. In this regard, the scale of the proposed development will be well assimilated within its landscape context without undue conflicts of scale with underlying landform and land use patterns. Furthermore, the rugged hills and ridges in the immediate surrounds of the Site have a notable utilitarian character due to the presence of the existing wind energy developments, in addition to extensive tracts of commercial conifer plantation. 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 its productive upland rural character, which wind turbines are already a key component of.

For the visual impact assessment, the 30 viewpoints are grouped and summarised in **Chapter 12** in terms of receptor type. The representative viewpoints are seen in **Table 12.1** and in **Figure NTS-3**.

Table 12.1: Representative viewpoints

| VP No. | Location |
|---------------|---|
| VP1 | Local Road at Gortnagross (Gort na gCros) |
| VP2 | Local Road north of Coolea Village (Cúil Aodha Village) |
| VP3 | Local road at Fuhirees (Na Foithrí) |
| VP4 | Local road at Lumnagh Beg (An Lománach Bheag) |
| VP5 | Local road intersection at Derrylahan (An Doire Leathan) |
| VP6 | Local road at Laharan East (An Leathfhearann Thoir) |
| VP7 | Local road at Caraghnacaha (Cathair na Cáithe) |
| VP8 | Local road intersection at Gorteenakilla (Goirtín na Coille) |
| VP9 | Local road south of Ballingearry (Béal Átha an Ghaorthaidh) |
| VP10 | Summit of Crohane Mountain |
| VP11 | N22 at Derrynasaggart (Doire na Sagart) |
| VP12 | Local road at Coomnagire (Com an Ghadhair) |
| VP13 | Western Summit of 'the Paps of Anu' |
| VP14 | Summit of Mangerton Mountain |
| VP15a | Gougane Barra (Guagán Barra) (Lakeside – St Finbarrs Oratory) |
| VP15b | Beara to Breifne Way (southern slopes above Gougane Barra (Guagán Barra)) |
| VP16 | Local road at Threegneeves |
| VP17 | Beara to Breifne Cycle Route at Gortnacarriga (Gort na Carraige) |
| VP18 | Local road above Lough Allua (Locha Lua)} |
| VP19 | Local road at Gortnahoughtee |
| VP20 | Local road at Kilbarry |
| VP21 | Rosnakilla |
| VP22 | N22 at Toonlane (Tonn Láin) |
| VP23 | N22 at Inchinlinane |

| VP No. | Location |
|--------|---|
| VP24 | Local road at Gortyrhilly (Gort Uí Raithile) |
| VP25 | Local road at Gortnabinna (Gort na Binne) |
| VP26 | Local road near Kilnamartyra (Cill na Martra) |
| VP27 | Local road at Coolea South (Cúil Aodha Theas) |
| VP28 | Local road at Derryfineen (Doire Fhínín) |
| VP29 | Local road at Gortnabinna (Gort na Binne) |
| VP30 | N22 Bypass above Ballyvourney (Baile Bhuirne) |

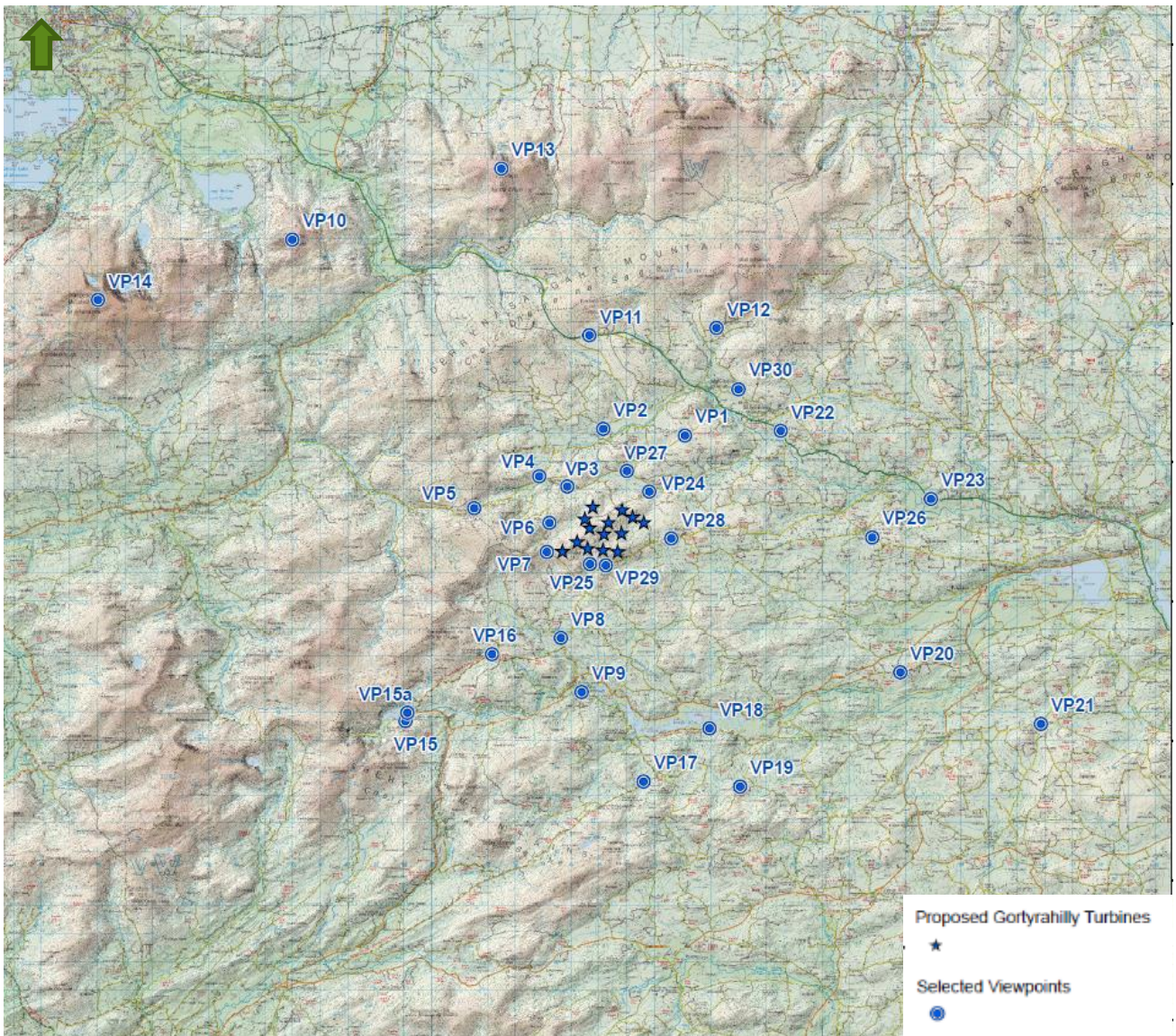


Figure NTS-3 Viewpoint map

The highest visual impact significance attributed in respect of the Development is 'Substantial-moderate' and this occurs at two locations; VP7 'Local road at Caraghnacaha (Carraig na Cáithe)' and VP28 'Local road at Derryfineen (Doire Fhínín)', which are both in close proximity to the site. In general, the proposed wind farm will give rise to a varied range of effects when considered in relation to receptor types. There are very few notable impacts at centres of population and along major routes, which are the receptor types that usually harbour the greatest numbers of receptors (people). Despite proximity, the effects on local community views are generally in the mid-range rather than highest end of the spectrum. This is less to do with the low population density and more to do with the enclosed nature of the rugged landscape in the central study area. It is also to do with the point that when broad elevated views are presented, they tend to be oriented away from high ground towards lower lying areas with the wind farm peripheral or even behind the viewer. The most impacted receptor type was designated scenic routes, but for similar reasons as local community views, which were often represented by the same viewpoints in this assessment, the turbines may be close, but they are generally not in the direction of most amenity. Instead, they tend to frame or lie in the opposite direction to these down-valley views to the east and south.

The mountain views from the Derrynasaggart (Doire na Sagart) and Mangerton ranges to the north and north-west were the most impacted in a cumulative sense even though the proposed wind farm itself was only a minor contributor to the overall effect. Although there are partial and distant views of the proposed turbines adjacent to existing turbines when viewed for the ridge above Gougane Barra (Guagán Barra), there are no views of turbines from the iconic lakeshore in the heart of valley overlooking the island of St Finbarr's Oratory.

Based on the landscape, visual and cumulative assessment detailed within chapter, it is considered that there will not be any significant effects arising from the proposed Gortyrähilly(Gort Uí Raithile) Wind Farm.

13 NTS.13 MATERIAL ASSETS AND OTHER ISSUES

Chapter 13 of the EIAR considers a number of other issues associated with the wind farm development, including potential effects on land use, forestry, telecommunications, electricity networks, aviation and utilities.

13.1 Agriculture

The site is characterised as being generally commercial forestry and rural, agricultural land, and is predominantly utilised for sheep and cattle grazing. There will be ten turbines located on or partly on agricultural lands. This will result in the change of use from agricultural pastureland to wind farm use. This will have a long-term slight, negative impact on agricultural

land use due to the removal of grazing lands for the duration of the project. However, no significant impacts are predicted on agricultural land use.

13.2 Telecommunications

Operators of microwave communication links were contacted during the EIA. Mitigation measures were adopted during the layout design to avoid impacting communication links. Disruption to television reception is considered unlikely following the switchover to digital broadcasting, as the signals are less susceptible to interference from turbines.

The implementation of mitigation measures will ensure no interference with communication links. Therefore, no significant effects are predicted on telecommunications or radio reception as a result of the Development.

13.3 Electricity Networks

The grid connection will be approximately 27.8km in length and will be along public roads, private roads and forestry roads. It is proposed to connect to the national grid via the underground 110 kV cables from the site to Ballyvouskill 220kV substation. Further details of the grid connection route can be found in **EIAR Appendix 13.2**.

Due to the fact that all on-site internal cabling will be underground as will the grid connection from the onsite substation to Ballyvouskill, there will be no impact on the overhead electricity network.

The Development will contribute directly and in the long term to the electricity network by strengthening it through additional renewable energy generation.

At the existing Ballyvouskill 220kV substation, the works required to facilitate the grid connection will be facilitated within the confines of the substation and its compound and thus will have a slight, short-term effect.

13.4 Air Navigation

Operating wind farms have the potential to cause a variety of effects on aviation. Rotating wind turbine blades may impact on radar operations, although it is not likely at Gortyrhilly (Gort Uí Raithile). The physical height of turbines can cause obstruction to aviation and the overall performance of communications, navigation and surveillance equipment. All structures over 150 m in height are required to have lighting to warn aviation traffic.

Consultation with aviation operators was undertaken and the Irish Aviation Authority responded. They requested an obstacle warning light system for the Development, the provision of coordinates of each turbine and tip height, and to notify them 30 days prior to any crane operations commencing.

The turbine locations will be added to aviation maps prior to construction, and all requests from the Aviation Authority carried out to ensure aviation safety protocols are followed. Therefore, effects on aviation as a result of the development will be negligible.

14 NTS.14 CULTURAL HERITAGE

Chapter 14 of the EIAR presents a baseline study of and impact assessment on, the cultural heritage of the site and the surrounding region. Site visits and desk studies were undertaken to identify and record any archaeological, architectural and cultural heritage assets which may be affected by the Development. The significance of effect on an asset is considered by establishing the asset's value/sensitivity, and how that may be impacted based on the proposed design of the Development.

There are three recorded archaeological monuments located within the Site Redline Boundary, each of which have been incorrectly mapped by the Archaeological Survey of Ireland. Field inspections carried out as part of the assessment confirmed the correct locations of extant remains of two of these monuments within the site (Wedge Tombs CO069-003---- and CO069-093----) while the location of the third example (Field boundary CO069-070----), as extrapolated from its description in the Archaeological Survey of Ireland inventory entry, appears to have been in an area impacted in recent years by mechanised ground excavations during land improvement works and no surviving surface traces of this feature were identified within the environs of any proposed construction area. The locations of the two extant wedge tombs have been avoided and will be cordoned off for the duration of the Construction phase. There are no known archaeological, architectural or cultural heritage remains within the footprint of the Development, and as such there will be no direct physical effects on any known archaeological or heritage features during any phase of the Development.

The site has the potential for the presence of unknown subsurface archaeological remains. Should the presence of archaeological features be revealed during the construction phase, the remains would be likely to suffer high magnitude impact. As such, mitigation is proposed for potential slight/moderate effects on unknown archaeological remains, which will entail a series of pre-construction (targeted geophysical survey and test trenching) and construction phase (monitoring of topsoil stripping) archaeological investigations under licence by the National Monuments Service which will be carried out by a suitably qualified archaeologist. In the event

that any sub-surface archaeological features are identified during these site investigations they will be recorded and then securely cordoned off while the National Monuments Service are consulted to determine further appropriate mitigation measures, which may include preservation in situ (by avoidance) or preservation by record (archaeological excavation).

The Operational phase will result in a range of long term, indirect negative impacts of a visual nature on the wider settings of archaeological sites within the environs of the site which will range from negligible to moderate in significance. Given the nature of the wind farm turbines there are no mitigation measures that can address these visual impacts, but it is noted that they will be reversed following the decommissioning phase.

The Construction and Operational phases will not result in any likely significant effects on the cultural heritage resource.

The assessment does not predict any likely cumulative effects on cultural heritage resources that are significant in terms of the EIA Regulations.

15 NTS.15 TRAFFIC AND TRANSPORT

Chapter 15 of the EIAR sets out the effect that construction traffic would have on the road network, and the consequent effects that that could have on people and communities nearby.

Potential effects associated with wind farm development are presented in two key forms: those from the transport of wind turbine components, and those as a result of the import of construction material, equipment and personnel.

Appendix 15.1: A computer model of the turbine delivery vehicles is used to identify locations along the turbine component delivery route where road improvements will be required to facilitate delivery for abnormal loads between Ringaskiddy Port and the wind farm site. This is considered suitable, subject to minor, upgrade works and alterations to street furniture (such as signs, bollards, etc.). These components would be transported with an escort vehicle as standard practice, to help ensure safe passage.

The haul route is proposed as:

- Exit Ringaskiddy Port onto N28.
- At the roundabout, continue on N28.
- At the roundabout, continue on N28.
- At the roundabout, take the 2nd exit onto N28.
- Continue on N28, then take the slip road onto N40.

- Continue on N40 to N22, use new Macroon By-Pass which ends north-west of Ballyvourney (Baile Bhuirne).
- Continue on N22, then turn right at the island junction at Cummeenavrick (Coimín an Bhroic) and complete a 180 degrees turning manoeuvre and continue onto the N22 to Ballyvourney (Baile Bhuirne).
- At Ballyvourney (Baile Bhuirne), take a right turn onto a temporary access track (to be constructed as part of the Development) as far as the Sullane (Sulán) River, provide a temporary bridge over the Sullane (Sulán) River and continue with the development of a new access track so as to merge onto the L-3400-79.
- Continue on the L-3400-79 and at the 'Y' junction, turn left onto the L-3405-0 local road.
- Continue on the L-3405-0 and at the 'Y' junction, continue onto the L-7405-0 local road.
- Take a left turn onto the upgraded private road to the Site entrance.

For the quarries to the south, trucks will use the R587, then the R584. As there is no direct access or junction between the new N22 Ballyvourney (Baile Bhuirne) to Macroon Road Development and the R584, trucks will use the existing N22 and then follow the L-3402 to the wind farm site.

From Keim, trucks will follow the R582 in a south-easterly direction. As there is no direct access or junction between the new N22 Ballyvourney (Baile Bhuirne) to Macroon Road Development, trucks could exit at Toolene (Tonn Láin) and return along the existing N22 to meet the L-3402 at Lissacressig (Lios an Chraosaigh). This would add an additional 10km to the route. Accordingly, should trucks deliver from the north, the existing N22 would be used and will then follow the L-3402 to the site,

The N22 Ballyvourney (Baile Bhuirne) to Macroon Road Development is currently under construction. The recorded traffic figures show that, in 2025, the N22 is predicted to be running at approximately 71.9% capacity at the turnaround location (existing N22 west of the by-pass) and therefore has capacity to accommodate additional traffic in the future. The N22 Ballyvourney (Baile Bhuirne) to Macroon Road Development is predicted to be running at approximately 11,100 to 11,200 AADT in 2027 or at 56% capacity. The amount of traffic that will be generated by the construction phase of the development and potential effects on people and nearby communities were assessed as negligible, except for the following:

- Driver delay during the short periods of time when the abnormal loads are moving, at points highly localised to the turbine components delivery route
- Pedestrian and vulnerable road users along the Beara to Brefine Way and a school located along the L-3402.

- Severance of communities either side of a road that is made busy, in this case settlements along the L-3402, namely Reananerree (Ré na nDoirí) and Derrylineen (Doire Fhínín).
- Mud and debris on the local road network from HGVs entering and egressing from the construction site
- Vibration caused by large vehicles, either airborne or ground-based as a result of a rough road surface

A number of mitigation measures are proposed to minimise effects, including:

- The applicant will confirm the intended timescale for deliveries and every effort will be made to avoid peak times such as school drop off times, church services, sporting events, peak traffic times where it is considered this may lead to unnecessary disruption.
- Drivers of all delivery vehicles should be made aware of the presence of schools and other sensitive receptors and that formal pedestrian crossing facilities are not present.
- Wheel cleaning facilities will be provided at the two proposed entrances to the site.
- To reduce dust emissions, vehicle containers/loads of crushed stone will be covered during both entrance and egress to the site.
- The local road network will be monitored and maintenance will be carried out as required with any repairs undertaken at the cessation of the construction phase.

A detailed Traffic Management Plan will be agreed with the relevant authorities including the community and will detail the measures to be implemented during the temporary construction/decommissioning phases.

No significant effects related to operational phase traffic will occur due to the minimal traffic that would be generated during that phase of the Development.

16 NTS.16 VULNERABILITY OF THE PROJECT TO MAJOR ACCIDENTS AND NATURAL DISASTERS

This section of the Environmental Impact Assessment Report (EIAR) describes the likely significant effects on the environment arising from the vulnerability of the proposed Gortyrally Wind Farm project (the “Development”) as detailed in **Chapter 2** to risks of major accidents and/or natural disasters.

Major accidents or natural disasters are hazards which have the potential to affect the Development and consequently have potential impacts on the environment. These include accidents during construction and operation caused by operational failure and/or natural hazards. The assessment of the risk of major accidents and/or disaster considers all factors

defined in the EIA Directive that have been considered in this EIAR, i.e., population and human health, biodiversity, land, soil (peat stability), water, air and climate and material assets, cultural heritage and the landscape.

A desk-study has been completed to establish the baseline environment for which the proposed risk assessment is being carried out. This will influence both the likelihood and the impact of a major accident or natural disaster. Local and regional context has been established prior to undertaking the risk assessment to develop an understanding of the vulnerability and resilience of the area to emergency situations. Further detail on the baseline environment is provided in section 16.2 of this EIAR. The scenario with the highest risk score in terms of the occurrence of major accident and/or disaster was identified as 'Contamination' of the Development and risk of 'Industrial Accident Fire/Gas Explosion' during the construction, operation and decommissioning phases. The Development has been designed and built in accordance with the best practice measures set out in this EIAR and, as such, mitigation against the risk of major accidents and/or disasters is embedded through the design.

The risk of a major accident and/or disaster during the construction of the Development is considered 'low' in accordance with the 'Guide to Risk Assessment in Major Emergency Management' (DoEHLG, 2010).

17 NTS.17 SUMMARY

Chapter 17 of the EIAR provides a summary of the significant effects from each EIAR chapter and also summarises the mitigation measures proposed to reduce either the likelihood or magnitude of these effects to an acceptable level, for ease of reference.