

17. TRANSBOUNDARY EFFECTS

This section of the EIAR describes the potential for transboundary effects of the proposed Glenard Wind Farm development, on Northern Ireland, during the construction, operation and decommissioning phases. This chapter has been completed in accordance with the guidance set out in Section 1.7 of Chapter 1 and draws on the consideration of potential transboundary effects in Chapters 5 to 14 of this EIAR.

The full description of the proposed development is provided in Chapter 4 of this EIAR.

17.1 Statement of Authority

This section of the EIAR has been prepared by Karen Mulryan and reviewed by Eoin McCarthy and Michael Watson. Karen is an Environmental Scientist with over 4 years' experience in private practice in both the UK and Ireland, where she has completed numerous assessments for EIAs and has experience composing a variety of EIAR chapters; particularly relating to wind energy. Eoin McCarthy (B.Sc. Env.), is a Senior Environmental Scientist and Project Manager with MKO. Eoin holds B.Sc. (Hons) in Environmental Science from NUI, Galway. Eoin has over 10 years' experience in the preparation of EIARs for wind energy developments. Michael has over 20 years' experience in the environmental sector. Following the completion of his Master's Degree in Environmental Resource Management, Geography, from National University of Ireland, Maynooth he worked for the Geological Survey of Ireland.

17.1.1 Policy and Guidelines

17.1.1.1 International Policy and Guidelines

The need to consider transboundary impacts has been embodied by The United Nations Economic Commission for Europe (UNECE) *Convention on Environmental Impact Assessment in a Transboundary Context*, (referred to as the 'Espoo Convention') adopted in 1991. The Espoo Convention requires that assessments are extended across borders between Parties of the Convention when a planned activity may cause significant adverse transboundary impacts. The Espoo Convention has been ratified by the European Union, Ireland and the United Kingdom of Great Britain and Northern Ireland.

Article 7 of EIA Directive 2011/92/EU as amended by Directive 2014/52/EU requires consultation between Member States in relation to the likely significant effects of proposed development in one State on the environment in another Member State:

“(1) Where a Member State is aware that a project is likely to have significant effects on the environment in another Member State or where a Member State likely to be significantly affected so requests, the Member State in whose territory the project is intended to be carried out shall send to the affected Member State as soon as possible and no later than when informing its own public, inter alia:

a) a description of the project, together with any available information on its possible transboundary impact;

(b) information on the nature of the decision which may be taken.

The Member State in whose territory the project is intended to be carried out shall give the other Member State a reasonable time in which to indicate whether it wishes to participate in the environmental decision-making procedures referred to in Article 2(2), and may include the information referred to in paragraph 2 of this Article.”

Annex IV(5) of the amended EIA Directive states that the description of the likely significant effects on the factors specified in Article 3(1) should cover inter alia the transboundary effects of the project. At the time of initial scoping and consultation for the proposed development, the United Kingdom of Great Britain and Northern Ireland was an EU member state. Thus, engagement with cross border agencies has continued throughout the pre-planning process. Please see section 16.1.4 below and Chapter 2 for details.

17.1.2 National Policy & Environmental Protection Agency Guidelines

Article 210(3)(a) of the Planning and Development Regulations 2001, as amended states:

‘Where the Board is of the opinion that the proposed development would be likely to have significant effects on the environment in a transboundary State, it shall indicate to the prospective applicant:

- (i) which bodies, in which States, should be notified for the purposes of Section 37E(3)(d), 181A(3)(c), 182A(4)(c) or 182B(4)(b)(iv), as appropriate, and*
- (ii) how many copies of the application and EIAR should be sent with the notification referred to in (i).’*

Section 2.6.1 of the *draft Guidelines on the information to be contained in Environmental Impact Assessment Reports (2017)* reiterates the transboundary requirement of the EU Directive, as amended, and states that:

“should an EIAR for any cross-border project or for any project that is likely to cause significant transboundary effects, contact with the relevant authorities in Northern Ireland or other Member States should be made. This will establish a consultation framework to consider and address these effects”.

17.1.2.1 Strategic Infrastructure Development Criterion

On the 18th of January 2022, the proposed development was deemed Strategic Infrastructure Development (SID) by An Board Plaeanála (‘the Board’). This determination is included as Appendix 2-3 of this EIAR.

In order to be considered as Strategic Infrastructure Development any such project must exceed the thresholds established in the Seventh Schedule of the Planning and Development Act, 2000 (as amended) and also satisfy one or more of the three criteria set out in Section 37A(2) of the Act.

The relevant threshold established in the Seventh Schedule relevant to the current project is “An installation for the harnessing of wind power for energy production (a wind farm) with more than 25 turbines or having a total output greater than 50MW”.

Under the Section 37A(2) of the Act the project must satisfy the seventh threshold criteria as well as satisfying at least one of the following criteria:

- a) The development would be of strategic economic or social importance to the State or the region in which it would be situate,*
- b) The development would contribute substantially to the fulfilment of any of the objectives in the National Planning Framework or in any regional spatial and economic strategy in force in respect of the area or area in which it would be situate,*
- c) The development would have a significant effect on the area of more than one planning authority.*

The third criterion (c) set out in section 37A(2) of the Planning and Development Act 2000 (as amended) is not considered a significant/relevant factor in the context of the current proposal as the site is located within the functional area of Donegal County Council and there are no other Planning Authority areas under the definition of the Planning and Development Act 2000 (as amended)¹ within proximity to the subject site. It is therefore considered that the proposed development will not have a significant effect on the area of more than one planning authority.

It is noted, however, that the proposed development is located approximately 7 kilometres from the land boundary with County Derry (at its closest point). Due to the nature of the proposed development it is acknowledged that there may be potential for transboundary effects to arise which cannot be ruled out.

As part of the EIA process, consideration must be given in relation to the potential for transboundary effects to arise. The proposed development is relatively proximate to Northern Ireland and the potential entry point for turbine components is Foyle Port and Harbour (therefore, the delivery route of components will go through Northern Ireland), it is acknowledged that the potential for transboundary effects to arise exists. A screening of potential transboundary effects was carried out across the various EIA themes. This screening was submitted with the letter requesting the opening of this SID determination process (ABP-310369-21) to further inform the Board's consideration of this matter.

17.1.3 Site Location Context

The site of the Glenard Wind Farm development is located on the Inishowen peninsula in Co. Donegal, approximately 5.9km east of Buncrana, 6.3km west of Quigley's Point and approximately 7km north of the International border with Northern Ireland at its closest point on land. Refer to Figure 17-1 for context. The list of all townlands within which the development site and grid route are located can be found in Chapter 1 Table 1-1 of this EIAR. However, the intended route for turbine component delivery runs through Northern Ireland.

It is intended that the port of entry for large turbine components will be Foyle Port and Harbour in Northern Ireland. Vehicles delivering large turbine components and other abnormal loads to the site will depart from the Foyle Port and Harbour and travel east for a short distance along the Port Road and Temple Road before travelling south on the Maydown Road and then turning southwest onto the A2 road. The delivery vehicles will then turn onto the A515 road and cross the River Foyle before re-joining the A2 at the A2/A515 intersection. The vehicles will cross the International border into the Republic of Ireland at the village of Muff, Co. Donegal and will continue to the site of the proposed development.

The proposed route is shown in Figure 4-24 in Chapter 4 of this EIAR.

17.1.4 Scoping & Consultation

The EIA scoping exercise is the process of determining the content, depth and extent of topics to be covered in the environmental information to be submitted to a competent authority for projects that are subject to Environmental Impact Assessment (EIA). This process is conducted by contacting the relevant authorities and Non-Governmental Organisations (NGOs) with interest in the specific aspects of the environment with the potential to be affected by the proposal. Full details on all consultees scoped and their responses can be found in Chapter 2.

A scoping and consultation exercise was conducted with statutory and non-statutory bodies in line with EPA guidelines, and the *'Best Practice Guidelines for the Irish Wind Energy Industry'* (Irish Wind Energy

¹ (The Act defines a Planning authority as a Local Authority which "means a local authority for the purposes of the Local Government Act 2001 (as amended by the Local Government Reform Act 2014), the Local Government Act, 2001 defines a local authority as – "(a) in relation to a municipal district, the county council or the city and county council in which the municipal district is situated, and (b) in every other case– (i) a county council, (ii) a city council, (iii) a city and county council")

Association, 2012). Due to the proximity of the international border to the proposed development, this scoping exercise including the City of Derry Airport and Derry City & Strabane District Council, who in turn scoped a number of statutory and non-statutory bodies in Northern Ireland.

City of Derry Airport

The City of Derry Airport (CoDA) replied to a scoping request from MKO Ireland on the 4th of September 2019 requesting dimensions of the proposed turbines along with the coordinates of each proposed turbine location. This information was provided to CoDA on the 2nd of October 2019. On the 21st of February 2020 MKO provided an update to the CoDA on the status of the proposed wind farm project along with an amended turbine layout.

The CoDA engaged Cyrrus Aviation Consultancy to carry out a detailed safeguarding assessment of the potential impact of the proposed turbines on the Obstacle Limitation Services (OLS) as well as Instrument Flight Procedures (IFP) (a set of instructions regarding navigation around aerodromes) serving the airport, including the proposed approach IFPs to each runway end.

On the 23rd of April 2020, MKO received an IFP Technical Study Report outlining each assessed IFP and the OLS from Cyrrus. The Cyrrus report details that the proposed Glenard turbines will infringe on CoDA's existing instrument flight procedures. However, the report proposes required mitigation options. The required mitigation options presented within the Cyrrus report are all related to changes in the CoDA's procedures.

Derry City and Strabane District Council

Derry City and Strabane District Council (DSDC) issued a formal response on the 26th May 2020 to a scoping and consultation exercise undertaken for the proposed Glenard wind farm. The DSDC subsequently consulted with:

- Department of Agriculture, Environment and Rural Affairs,
- Historic Environment Division,
- Department for Infrastructure
- Environmental Health Service (EHS)
- Shared Environmental Services
- Loughs Agency
- Belfast International Airport
- Civil Aviation Authority – Directorate of Airspace
- Aquiva Services Ltd.

The list of consultees and correspondences are summarised in Section 2.4 of Chapter 2 of the EIAR. Details of these scoping responses with statutory and non-statutory bodies in Northern Ireland and where, within the EIAR, their comments, if any, are outlined in Section 2.4 of this EIAR.

17.2 Impact Assessment Methodology

The potential for transboundary impacts and their effects have been assessed throughout this EIAR and are collated here under the following key environmental headings:

- Population & Human Health
- Biodiversity
- Ornithology
- Land, Soils and Geology
- Hydrology and Hydrogeology
- Cultural Heritage
- Air and Climate

- Noise and Vibration
- Landscape and Visual
- Material Assets

17.2.1 Population and Human Health

As the proposed development is located approximately 7km northwest of the border with Northern Ireland at its closest point and, therefore at least 7km from the closest sensitive receptors in Northern Ireland. As such, it is not anticipated that there will be any transboundary effects in relation to health and safety, population, land-use, tourism and amenity, dust emissions or shadow flicker during the construction, operation and decommissioning of the proposed development.

17.2.2 Biodiversity

The proposed development is not predicted to result in a significant transboundary effect in relation to biodiversity. The rationale for this conclusion is as follows:

- Given the considerable separation in distance between the proposed development (c.7km) and Northern Ireland there is no potential for any direct effects on ecological receptors in Northern Ireland as a result of the proposed development; a full suite of ecological desk and field surveys has been undertaken for the proposed development and no potential for significant residual direct or indirect effects on ecological receptors - see Chapter 6 of this EIAR.
- Robust mitigation measures are in place in relation to the protection of water quality, which will ensure that there is no deterioration in water quality of downstream ecological receptor as a result of the proposed development, including within Northern Ireland.
- The accompanying Natura Impact Statement fully assesses the potential adverse impacts on EU sites within Northern Ireland that have been judged to be within the likely zone of impact in the Appropriate Assessment Screening Report. The report concludes that *'it can be objectively concluded that the Proposed Development, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site'*.

17.2.3 Ornithology

The proposed development is not predicted to result in a significant transboundary effect in relation to ornithology. The rationale for this assessment is as follows:

- The considerable separation distance between the proposed development (c.7km) and Northern Ireland limits the potential for birds from Northern Ireland to utilise habitats within the proposed development area with any regularity.
- Disturbance during the construction phase and disturbance displacement during the operational phase are not predicted, given the c. 7km separation distance greatly exceeds the distance at which such effects are predicted (typically less than 1km) (Ruddock and Whitfield, 2007).
- Significant (physical or disturbance displacement mediated) habitat loss would only result if there was no alternative similar habitat. The proposed development area does not contain habitats (i.e. predominantly forestry and some peatland) that are unique to the local area. Therefore, were habitat loss to occur it would not result in the loss of a scarce resource locally.
- No significant barrier effect or collision risk was identified for any species as per Chapter 7, Sections 7.8.2 and 7.12.2 of this EIAR. Additionally, as outlined in the first point birds from Northern Ireland are unlikely to visit the proposed development area with any

regularity given the separation distance, this will further reduce these potential transboundary effects.

As per Percival (2003) the magnitude of the effect on the key ornithological receptors is assessed as Negligible. The cross tabulation of a Very High sensitivity species (e.g. golden plover) and Negligible Impact corresponds to a Low effect significance. Golden plover was used as an example as it is one of the highest sensitivity species identified as a key ornithological receptor at this wind farm site. Therefore, the significance of the potential impact is classed as, no greater than, a long-term slight negative effect following EPA criteria (2017) for any key ornithological receptor, i.e. Golden Eagle, Golden Plover, Hen Harrier, Merlin, Peregrine, Whooper Swan, Black-headed Gull, Common Gull, Grey Heron, Greylag Goose, Herring Gull, Mallard, Curlew, Kestrel, Snipe, Woodcock, Buzzard and Sparrowhawk. It is noted, as per Section 7.8.5 in Chapter 7 of this EIAR, that no significant effects were identified in relation to the turbine delivery route.

17.2.4 Land, Soils and Geology

Due to the localised nature of the proposed construction works which will be kept within the proposed development site boundary, there is no potential for transboundary effects on the land, soils and geology environment in Northern Ireland as all effects are direct within the proposed development site.

17.2.5 Hydrology and Hydrogeology

The majority of the Proposed Development (including all of the wind farm site and grid connection infrastructure) drains into Lough Swilly which is Republic of Ireland owned waters and therefore no transboundary effects due to the construction, operation and decommissioning of these elements of the proposed development.

A section of the turbine delivery route works (1 no. link road) drains to Lough Foyle, who's waters are owned by both the Republic of Ireland and Northern Ireland. However, due to the small-scale nature of these works, no hydrological effects on Lough Foyle and, therefore, no transboundary effects will occur.

17.2.6 Landscape and Visual

Given that the site of the proposed development is located approximately 7km northwest of the land border with Northern Ireland at its closest point, the potential exists for transboundary landscape and visual effects. Furthermore, the LVIA and LCA study areas both extend eastwards into Northern Ireland and so landscape and visual receptors within Northern Ireland are included in this assessment.

During the construction phase, all of the works will be confined to the proposed development site and, therefore, there is no potential for transboundary effects on landscape or visual receptors located in Northern Ireland.

However, during the operational phase, as shown in Figure 12-1, the proposed turbines will be visible from Northern Ireland. The Landscape Character Assessment (Appendix 12-2) includes the assessment of LCA 31: *Burribagh and Drumahoe* and LCA 33 – *Lough Foyle Alluvial Plain* (refer to Figure 12-4), both located in Co. Derry. There will be partial visibility of the proposed development within these landscape character areas. The LCA concluded that the effects of the proposed development on these LCA's will be Imperceptible and Not Significant, respectively.

As part of the visual impact assessment, Viewpoints 06, 07 and 13 are located within Northern Ireland. All three viewpoints are located between 14km and 18km from the closest proposed turbine. The Viewpoint Assessment (Appendix 12-3) concludes that the residual effect of the proposed development on visual receptors, at all three of these locations, is Imperceptible. This is due to limited spatial extent

of the proposed development when viewed from these locations, the level of screening and the intervening distances between the visual receptors and the proposed turbines.

17.2.7 Air and Climate

During the construction phase, turbine components will be transported from the Port of Derry to the site of the proposed development and will therefore be travelling on the Northern Ireland road network for distance of approximately 12km. The delivery of turbine components is expected to take place over a number of weeks during the construction period. There is the potential for temporary, imperceptible negative transboundary impacts on air quality and climate due to the greenhouse gas emissions from turbine component delivery vehicles. The turbine component delivery vehicles will be maintained in good working order thereby keeping emissions to a minimum. The construction of the proposed development will not have significant effects on air quality and climate in Northern Ireland.

During the operational phase of the proposed development, the proposed development will generate energy from a renewable source. This energy generated will offset energy and the associated emission of greenhouse gases from electricity-generating stations dependent on fossil fuels, thereby having a positive effect on climate. The proposed development will displace carbon dioxide from fossil fuel-based electricity generation, over the proposed 35-year lifespan of the proposed wind farm. The proposed project will assist in reducing carbon dioxide (CO₂) emissions that would otherwise arise if the same energy that the proposed wind farm will generate were otherwise to be generated by conventional fossil fuel plants. This is a long-term moderate positive transboundary impact on air quality and climate in Northern Ireland. The operation of the proposed development will have a positive effect on air quality and climate in Northern Ireland.

17.2.8 Cultural Heritage and Archaeology

Although the proposed turbine delivery route to the proposed development site originates and travels along public roads in Northern Ireland, no groundworks are proposed within Northern Ireland and therefore there will be no direct or indirect impacts on any cultural heritage features located therein. Areas where groundworks are proposed (such as road widening) are confined to County Donegal and a full assessment of such areas was undertaken. No Northern Ireland Sites and Monuments Record (NISMR) sites are located within 5km of the nearest proposed turbines and therefore no transboundary effects on NISMRs sites will take place as a result of the proposed turbines. No monuments in State Care or Scheduled monuments (Northern Ireland) are located within the 10km study area for State Care monuments and therefore there will be no transboundary effects on setting as a result of the proposed turbines. Therefore, there is not potential for transboundary effects to the Cultural Heritage resource.

17.2.9 Noise and Vibration

With regards to noise sensitive locations in Northern Ireland, the ETSU-R-97 Guidelines are pertinent as the “Wind Energy Development Guidelines” published by the Department of the Environment, Heritage and Local Government (2006) are not applicable in this jurisdiction.

It is noted that there is no noise-sensitive location within Northern Ireland in the study area, or within the 35dB cumulative contour.

17.2.10 Material Assets

17.2.10.1 Traffic and Transport

The impacts of the Proposed Development on the road network in Northern Ireland will result from the deliveries made by abnormally sized vehicles delivering the turbine components from the proposed

port of entry in Derry, through the Northern Irish road network between the Port of Derry, across the River Foyle to the A2 travelling north towards the site north of the City of Derry. It is proposed that these deliveries will be made during the night in order to minimise the impacts on existing road users. There will also be impacts on days when smaller turbine components are delivered from the port of Derry using standard HGV's.

During the 27 days when the various large component parts of the wind turbine plant are delivered to the site using extended articulated HGVs, the effect of the additional traffic on these days will be negative, temporary and moderate due to the size of vehicles involved, if these deliveries take place during the day. The direct effect will be reduced from moderate to slight if these deliveries are made at night, as is proposed.

During the 16 days of the turbine construction stage when general materials are delivered to the site, the delivery of construction materials will result in a negative impact on the surrounding road network. The direct effect during this period will be temporary and will be imperceptible to slight.

The locations where temporary measures will be required within the curtilage of the existing highway to facilitate these deliveries are identified in Section 14.1.8 of Chapter 14.

There will be no transboundary impacts on road users in Northern Ireland during the operational phase of the proposed development as there will only be approximately two maintenance staff travelling to site at any one time, using the road network in the Republic of Ireland, resulting in typically two visits to the site on any one day made by a car or light goods vehicle.

17.2.10.2 Telecommunications and Aviation

There will be no transboundary effects relating to the proposed development in relation to telecommunications or aviation in Northern Ireland. As stated in Section 12.2.4.5 above, the proposed development will have no significant effects on telecommunications and aviation once mitigation measures are implemented. During the development of any large project that holds the potential to affect telecoms or aviation, the Developer is responsible for engaging with all relevant Telecoms Operators and the relevant Aviation Authorities to ensure that the proposal will not interfere with television or radio signals by acting as a physical barrier. In the event of any potential impact, the Developer for each individual project is responsible for ensuring that the necessary mitigatory measures are in place. Therefore, as each project is designed and built to avoid impacts arising, a cumulative impact cannot arise.