

9 TRANSBOUNDARY

9.1 INTRODUCTION

1 The issue of likely significant transboundary effects is of importance in the context of this proposed development, as it comprises part of an overall interconnection project between Ireland and Northern Ireland.

2 Article 7 of the consolidated EIA Directive 2011/92/EU provides the basis for consultation between Member States in relation to the likely significant effects of proposed development in one state on the environment in another Member State. The principal obligation is in respect of information and consultation and is imposed by Article 7(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.

3 Accordingly, potential transboundary impacts from the proposed development located in counties Meath, Cavan and Monaghan may have effects on the environment in Northern Ireland, and these potential transboundary impacts are considered in this chapter.

4 It should be noted that transboundary impacts on the environment of Ireland from System Operator Northern Ireland's (SONI) proposals for that portion of the proposed interconnector located in Northern Ireland are reported separately in a separate consolidated Environmental Statement (ES), and associated Consolidated ES Addendum, prepared in respect of the SONI proposal and submitted to the relevant competent authority in respect of the application for development consent in Northern Ireland.

5 Furthermore, the respective applicants note the publication by the European Commission (EC) of *Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects* (May, 2013), in which the EC recognises that large-scale projects, physically located in more than one country (i.e. transboundary projects) are likely to have significant environmental effects in each country and involve many stakeholders. The EC also recognises that the environmental and socio-economic impacts of transboundary projects

go beyond local, regional and national borders. Accordingly, the stated purpose of the EC's document is to provide guidance for applying the legal provisions related to EIA for large-scale transboundary projects. Significantly, "*large-scale transboundary projects*" is defined in the ECs guidance document as projects which are implemented in at least two Member States and which are likely to cause significant effects on the environment or significant adverse transboundary impacts. This definition is based on a combination of Articles 2 of the EIA Directive and Espoo Convention. Finally, it is specifically stated that the guidance has to be viewed in conjunction with Regulation EU/347/2013 *on guidelines for trans-European energy infrastructure [TEN-E regulation]*, which sets out a number of legal requirements designed to streamline permitting procedures for energy infrastructure 'Projects of Common Interest' (PCI) contained in a European Union (EU) list established pursuant to the regulation. By way of Commission Delegated Regulation 1391/2013 (made on 14 October 2013), the "*Ireland – United Kingdom interconnection between Woodland (IE) and Turleenan (UK – Northern Ireland)*" was expressly listed as a PCI (Annex VII, para. 2.13.1).

- 6 Accordingly, a *Joint Environmental Report* has been prepared by the respective applicants that cover the proposed interconnector from Turleenan, County Tyrone to Woodland, County Meath in a manner which assesses its overall effects and, in particular, cumulative and significant adverse transboundary effects, in a manner consistent with the approach suggested in the European Commission's guidance. The *Joint Environmental Report* comprises **Volume 4** of the application documentation.

9.1.1 Transboundary Consultation

- 7 As set out in **Chapter 3** of this volume of the EIS, the Department of the Environment (Northern Ireland) (DOENI) was consulted as part of the formal scoping exercise undertaken by An Bord Pleanála, and other statutory agencies made submissions to DOENI in that context. EirGrid also met with representatives of the DOENI. Potential impacts on the environment of Northern Ireland identified during this consultation have been evaluated in the EIS.

9.2 POTENTIAL TRANSBOUNDARY IMPACTS

9.2.1 Human Beings

9.2.1.1 Population & Economic

- 8 The overall project will not give rise to transboundary impacts in respect of population demographics, as this is influenced by factors outside this project.

- 9 Economic impacts during the construction stage are likely to remain local to the Meath, Monaghan and Cavan areas with no significant transboundary impacts anticipated. There will be wider economic benefits arising from improvements to the electricity grid on the island of Ireland; and these will be experienced in both jurisdictions. As noted in **Chapter 2** of this volume of the EIS, it is estimated that there will be savings in the Single Electricity Market (SEM) of approximately €20m in 2020 rising to a range of between €40m and €60m by 2030 once the interconnector is constructed. This is a significant positive transboundary impact.

9.2.1.2 Land Use

- 10 There are six land parcels located in County Armagh (reference numbers NI_165, NI_173, NI_174, NI_176, NI_177 and NI_045 & 166), along the border in the vicinity of the border crossings at Lemgare, County Monaghan (see Figure 3.2, **Volume 3C Figures**, of the EIS). The impacts from the proposed development (towers and overhead line (OHL)) located in County Monaghan on these six land parcels located in County Armagh (and land uses thereof) are considered Imperceptible.

9.2.1.3 Tourism

- 11 The majority of the most significant tourism attractions in Northern Ireland are located in counties that are a significant distance from the proposed development. Of the top 10 tourist attractions identified in statistics from the Northern Ireland Tourist Board (NITB), the majority (five) are in County Antrim, with one each in counties Fermanagh, Down, Derry / Londonderry, Tyrone and Armagh.
- 12 The main tourist attractions identified in County Armagh within 5km of the proposed development are within Armagh City, with the exception of the Navan Centre, an ancient monument (located 4km to the west of Armagh City). The Armagh / Monaghan border area is not one of Fáilte Ireland's, or the Northern Ireland Tourism Board's, established tourism regions and no specific tourist attractions or amenities are identified in this area.
- 13 Due to the intervening distance from tourist attractions in Northern Ireland it is not anticipated that the proposed development will have any significant impact on tourism and amenity in the Armagh / Monaghan border area.

9.2.1.4 EMF

- 14 EMF emissions, will comply with the International Commission on Non-Ionising Radiation Protection (ICNIRP) and EU guidelines on exposure. Furthermore, as electric and magnetic field (EMF) levels dissipate within a short distance of the OHL, no significant transboundary impacts will occur from the proposed development located in counties Meath, Cavan or Monaghan.

9.2.2 Flora & Fauna

- 15 Works on the proposed development within counties Monaghan, Cavan or Meath will have no direct impacts on habitats located in Northern Ireland. There is some potential for impacts on mobile species, but these are not likely to be significant. Badgers, Otters and Bats may have territories that straddle the jurisdictional border, but the nature of the proposed electricity transmission development means that these species are unlikely to be significantly adversely affected. There will be no impacts on sites designated for their conservation interest at either European or national level within Northern Ireland. The impact on Whooper swans and other mobile bird species that may use sites on both sides of the border is likely to be of imperceptible significance in terms of both population numbers and on availability of feeding sites. Following extensive surveys undertaken during the current appraisal no flights were observed between jurisdictions and the most important sites in both jurisdictions are well removed from the border area. Considering the landscape that dominates the northern part of the border area, there is no reason to suspect the presence of regular flight paths or commuting routes that may be used by Whooper swans or other water birds (i.e. an absence of large river valleys etc.). Mitigation measures to render the OHL more visible in those parts considered to present the greatest risk will be implemented in both jurisdictions, and will reduce the overall collision risk identified.

9.2.3 Soils, Geology and Hydrogeology

- 16 Impacts on the soils and geology are limited to the immediate area of the proposed towers (and associated excavations and works). In these circumstances, it is noteworthy that Towers 98-102 are located in Northern Ireland and, insofar as this appraisal is concerned, Towers 103-107 are located in County Monaghan within 200m of the jurisdictional border.
- 17 Based on an evaluation of predicted impacts, it is considered no significant impacts will occur on the geology of and groundwater conditions in Northern Ireland from excavation or other works at the sites of proposed towers in counties Monaghan, Cavan or Meath. Accordingly, it is concluded that the proposed development would have no significant transboundary impacts on soils, geology and hydrogeology.

9.2.4 Water

- 18 Impacts on the water environment are limited to the immediate area of the proposed towers (and associated excavations and works). Part of the proposed development is located in the River Bann International River Basin District (IRBD), as defined in the Water Framework Directive (WFD) and the North-West International RBD (River Erne System).
- 19 Towers 98-102 are located in Northern Ireland adjacent to the border and Towers 103-107 are located in County Monaghan, within 200m of the border, and within the catchment of the Clontibret Stream. The Clontibret Stream, which actually delineates the border in the areas of Towers 103 to 107, ultimately flows into the Northern Ireland section of the River Bann Catchment at Ardgonnell Bridge, Middletown, County Armagh, 11km down-gradient. The Annalee and Knappagh Rivers flow through the central section of the proposed development (between Towers 131 and 200) before ultimately flowing into the Northern Ireland section of the River Erne Catchment to the north of Belturbet, 40km down-gradient of the proposed development.
- 20 Based on an evaluation of predicted impacts, it is considered that no significant impacts will occur on the surface water environment in Northern Ireland from construction or operation of the proposed electricity transmission development located in counties Monaghan, Cavan or Meath. Accordingly, it is concluded that the proposed development would have no significant transboundary impacts on the surface water environment.

9.2.5 Air

9.2.5.1 Noise and Vibration

- 21 No significant transboundary impacts associated with noise and vibration are predicted. Construction and operational phase impacts are predicted to meet the relevant noise and vibration limits at the nearest sensitive receptors. Noise sensitive receptors comprise houses, schools, hospitals, places of worship, heritage buildings, special habitats, amenity areas in common use and designated quiet areas. There are none of these sensitive receptors located within 50m of a proposed tower location in County Monaghan, which could have the potential to cause an impact on the environment of any receptor in Northern Ireland. As such, no significant transboundary impacts are therefore predicted.

9.2.5.2 Air - Climate

- 22 The proposed transmission line will contribute positively to a reduction in transboundary impact on climate through facilitating a reduction in national greenhouse gas emissions in compliance with the EU emission targets for Ireland and Irish national policy. Ireland has committed to achieving the EU's integrated approach to climate and energy policy that aims to combat climate change through achieving the climate and energy targets (i.e. 20% reduction in GHG below 1990 levels, 20% of energy consumption from to come from renewable energy targets and 20% reduction in primary energy use). This is a key climate change mitigation identified in the EU's *Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment*.
- 23 An imperceptible negative impact on transboundary air quality will arise due to the construction of the transmission line with the level of impact being reduced by the implementation of the mitigation measures outlined in this chapter of the EIS and the mitigation measures outlined in the consolidated Environmental Statement (ES) and consolidated ES Addendum relating to the Northern Ireland section of the proposed interconnector.
- 24 *Ireland's Transboundary Gas Emissions* in 2011 published by the EPA in February 2013 indicates that in 2011 Ireland was below 3 of the 4 Annex 1 ceilings for 2010, under the *National Emissions Ceiling Directive* (2001/81/EC). The submission shows Ireland exceeding its 2010 NOx ceiling by 2.6 kilotonnes. Emissions of each of the four pollutants in 2011 are shown below:
- SO₂ 23.4 kilotonnes;
 - NO_x 67.6 kilotonnes;
 - VOC 43.6 kilotonnes; and
 - NH₃ 108.7 kilotonnes.
- 25 The provision of the 400 kV transmission circuit will increase the availability of renewable energy contributing to further reductions in SO₂ and NO_x emissions associated with displaced fossil fuelled power generation and through provision of an efficient transmission system.
- 26 Climate change is a globally occurring phenomenon with impacts on the global climate related largely to atmospheric CO₂ levels and other greenhouse gas levels and emissions.

9.2.6 Landscape

- 27 There will be localised transboundary landscape and visual effects arising from the part of the alignment between Towers 102 (the actual tower is located in Northern Ireland) and 110, as this section of the proposed development in County Monaghan is closest to the jurisdictional border with Northern Ireland.
- 28 These transboundary effects will occur at the edge of the Armagh Drumlins Landscape Character Area (LCA 66), which is a relatively small scale and hilly-farmed landscape with high sensitivity. The proposed transmission development will run adjacent to the border through a small, relatively enclosed valley. The Monaghan Way travels along the southern part of the valley, and Doohat and Crossbane roads in Northern Ireland are located along the northern part. A quarry is located just south of the valley at Lemgare.
- 29 The localised landscape character will experience a change in the sense of scale with the inclusion of the towers, as the proposed development will introduce a new scale of structure into a man-altered landscape that contains existing houses, farm buildings and roads. This change is considered a locally significant effect on landscape character.
- 30 Due to the enclosed nature of this valley, there will be localised, significant visual effects on views looking south from the parts of Crossbane Road and Doohat Road, located in County Armagh, where unscreened open views are possible into the valley. The visual effects at one such open view are shown in **Figure 9.1** (Photomontage 3).

Photomontage 3 looking south from Crossbane Road in Armagh (321m to closest tower)⁹²

Existing view



⁹² Full scale photomontages and wireframes are contained in Appendix 11.2, **Volume 3C Appendices**, of the EIS.

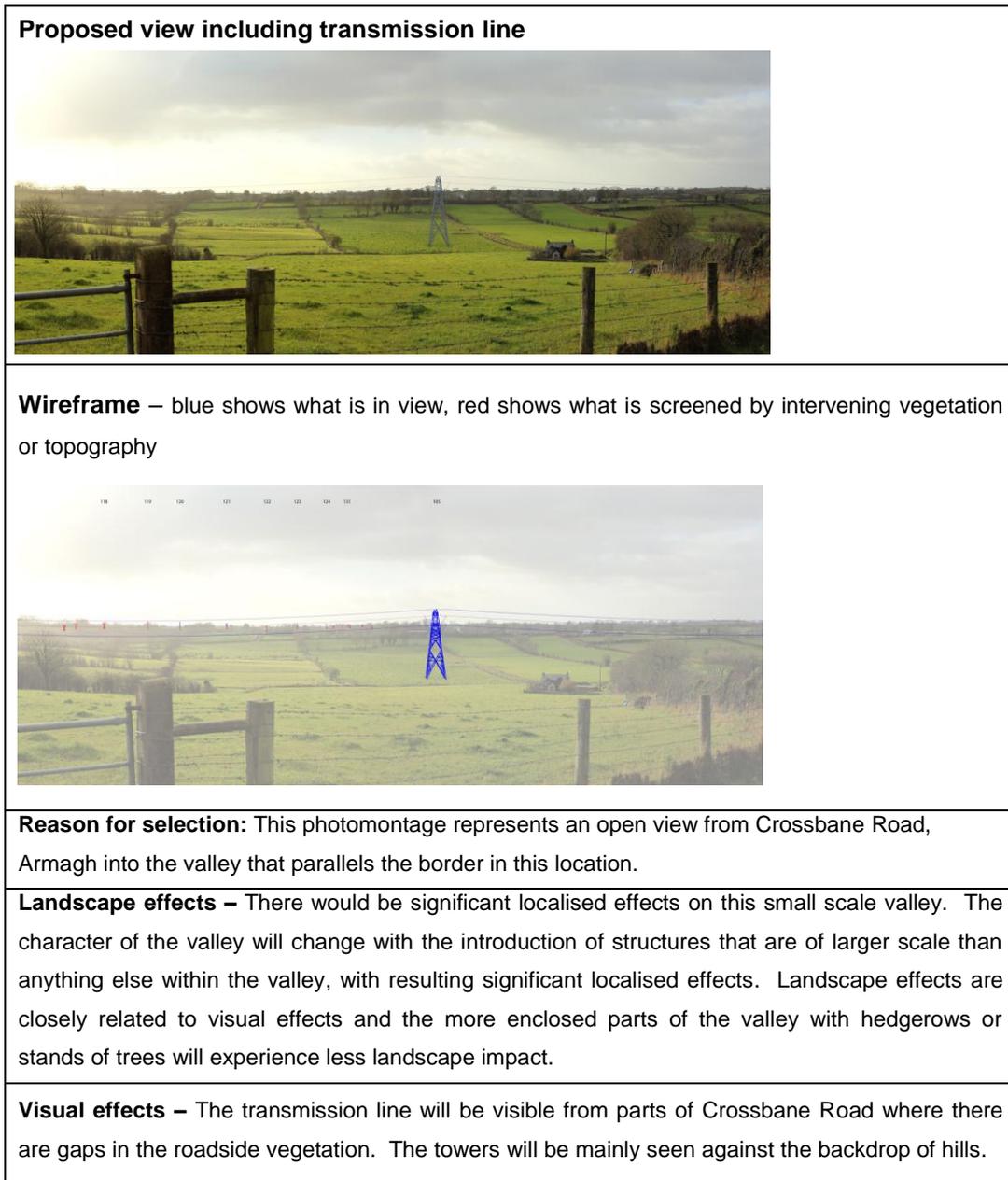


Figure 9.1: Photomontage 3 - from Crossbane Road, County Armagh

- 31 Other viewpoints will not experience any visual effects due to screening provided by intervening vegetation. While the visual effects are significant within the valley, the topography also serves to limit the visibility over a wider area. The transmission line will cross a local road in Coolartragh, a stretch of which is located in County Armagh. The proposed development is likely to be visible for a stretch of approximately 500m along the part of the road located in County Armagh.

- 32 There will be no significant transboundary landscape or visual effects, beyond distances of 600-800m from the towers, although views of parts of certain towers will be distantly visible from unscreened locations up to 1-1.5km from the transmission line, particularly from elevated parts of the landscape.

9.2.7 Material Assets

9.2.7.1 Other

- 33 There will be a positive transboundary impact associated with providing a high capacity electricity transmission line between Ireland and Northern Ireland. This will lead to improvements in the efficiency of the all-island electricity market, ensure a secure supply of electricity, and will allow more renewable energy to be connected to the network.
- 34 The proposed development in counties Monaghan, Cavan and Meath will have no transboundary impacts on the gas infrastructure in Northern Ireland. Additionally the proposed development will have no transboundary impacts on telecom services operating in Northern Ireland. Where telecom services traverse the border, consultation will take place as required with service providers prior to any construction works in the proximity of existing telecoms services.
- 35 To manage construction waste, the main contractor will be required to develop, implement and maintain a *Construction Waste Management Plan* during the construction works and there are adequate waste management facilities in counties Monaghan, Cavan and Meath - therefore waste material will not be transported to facilities in Northern Ireland.
- 36 There are no licenced airfields in Cavan and Monaghan. As confirmed by the Irish Aviation Authority (IAA), the closest licenced airfield to the proposed development is Trim Airfield, in County Meath. Aircraft originating in Northern Ireland with Trim Airfield as their destination would need to be visually aware of tower positions and a formal approach procedure of '*visual contact of pylons / cables required before field approach*' should be introduced, even though there is a clear margin between the top of the towers and the obstacle limitation surface for Trim Airfield.
- 37 Ballooning companies operating in Northern Ireland will have to be cognisant of the proposed development close to the jurisdictional border. The potential presence of transmission lines in this area will have to be considered by balloon pilots as part of their flight planning procedures. The transmission lines will have to be taken into account by the balloon pilots for launching and landing, but as stated by the IAA, balloon pilots are permitted to fly over power lines.

9.2.7.2 Traffic

- 38 Each tower site will be, in effect, a separate temporary construction site which will be accessed by road. Access locations have been identified for each site and haul routes to these accesses have also been identified for the delivery of materials and personnel to site, all of which are in Ireland. All such routes identified close to the jurisdictional border are located within County Monaghan, and do not cross the border into Northern Ireland. Thus, despite the proximity of the northern end of the proposed development to the border between Northern Ireland and the Ireland, it is not expected that traffic delivering materials to site will cross the border into Northern Ireland.
- 39 It is expected that the materials used for the construction of the towers will emanate from the proposed material storage yard located at the townlands of Monaltyduff and Monaltybane, Carrickmacross, County Monaghan. However the possibility remains that some construction materials which are stored at the materials storage yard may actually be sourced from suppliers based in Northern Ireland. Similarly, the location where construction workers reside is not known and they may also commute to the construction materials storage yard or construction sites from Northern Ireland.
- 40 The volumes of traffic associated with materials and / or workers coming from Northern Ireland would not be large and as such the transboundary traffic impact as a result of the proposed development is considered to be minimal.

9.2.8 Cultural Heritage

- 41 All known archaeological, architectural and cultural heritage sites listed on the Northern Ireland Environment Agency (NIEA) website were included in this appraisal of the potential impacts that the proposed development located in counties Monaghan, Cavan or Meath would have on the receiving cultural heritage environment in Northern Ireland. The appraisal of the potential transboundary impacts of the proposed development on the setting of cultural heritage sites was also considered. This appraisal comprised an evaluation of a site's 'Sensitivity to Impacts on Setting' and was based on analysis of the data sources noted above and a consideration of the criteria as described in Appendix 14.1.5.1, **Volumes 3C** and **3D** of the EIS and professional judgement. It is concluded that there will be no direct physical impacts on known archaeological, architectural or cultural heritage sites, structures, monuments or features located in Northern Ireland as a result of the construction or operation of the proposed development located in counties Monaghan, Cavan or Meath. There is only a single archaeological monument located in Northern Ireland listed in the Northern Ireland Sites & Monuments Record (NISMR) in a site classified as an enclosure (ARM 023:004), which is proximate to any part of the proposed development in County Monaghan. This tree-covered

site is located in County Armagh, approximately 197m from Tower 106, which is located in County Monaghan, and is described as a “*polygonal earthwork on a slight eminence*”. Looking south and south-east from the site located in County Armagh towards the proposed alignment located in County Monaghan, there will be inter-visibility, however, the sensitivity of the site to impacts on setting is considered to be moderate and the magnitude of the impact substantial. The overall significance of this transboundary impact of the proposed development located in County Monaghan on the setting of the site in Northern Ireland was considered to be moderate. The residual impact will consist of a permanent, moderate, negative impact on the setting of the archaeological monument throughout the operational phase of the proposed development.

- 42 There will be no impacts on the previously unrecorded cultural heritage resource in Northern Ireland, as a result of the construction of the proposed development within counties Monaghan, Cavan or Meath.

9.3 CONCLUSIONS

- 43 Based on the evaluations carried out by EirGrid and its consultants, which are summarised in this chapter, transboundary impacts are predicted to range from imperceptible to moderate, apart from localised significant landscape and visual impacts (specifically a locally significant effect on landscape character).
- 44 The significance of the transboundary impact of the proposed development located in County Monaghan on the setting of an archaeological site in Northern Ireland (NISMR enclosure site (ARM 023:004) was considered to be moderate. The residual transboundary impact will consist of a permanent, moderate, negative impact on the setting of the archaeological monument throughout the operational phase of the proposed development.