

21 INTERACTIONS OF THE FOREGOING

21.1 INTERACTIONS OF THE FOREGOING

21.1.1 Introduction

The purpose of this chapter is to identify significant interactions and interdependencies in the existing environment and set out the likely interactions of, and between effects predicted as a result of the Project. Impact interactions and inter-relationships have been considered throughout the EIA process. The foregoing topics in earlier chapters do not exist in isolation from each other and consequently, any impact on one element of the environment may also affect another.

The requirement for the identification of interactions between the various aspects of the environment as detailed throughout the EIAR is set out in Article 3(1) of the EIA Directive, which states:

The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors: a) population and human health; b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; c) land, soil, water, air and climate; d) material assets, cultural heritage and the landscape and e) the interaction between the factors referred to in points (a) to (d)."

21.1.2 Effect Interactions

Where any potential adverse effects have been identified during the assessment process, these effects have been avoided by embedded design mitigation or at a minimum, reduced by the proposed mitigation measures.

21.1.3 Defined Terms

Table 1.1 in **Section 1.2** of **Chapter 1: Introduction** lists the common Key Defined Terms used through this Environmental Impact Assessment Report (EIAR).

21.2 INTERACTIONS

Interactions are considered by a means of a matrix which are set out in **Table 21.1**. Technical assessments have assessed pathways, both direct and indirect that can magnify effects through the interaction or accumulation of effects. Effects have been cross-referenced between chapter topics. An outline of potential interactions between chapters/topics is presented in **Table 21.2**.

Table 21.1: Summary matrix of Interactions of Effects during Construction, Operational and Decommissioning Phases (Source: Adapted from EIAR Guidelines, 2022)

	Planning Policy		Population & Human Health		Biodiversity		Bat Ecology		Ornithology		Aquatic Ecology		Soils & Geology		Hydrology and Hydrogeology		Landscape & Visual		Noise		Material Assets		Cultural Heritage		Traffic & Transport		Shadow Flicker		Air		Climate		Major Accidents & Natural Disasters				
	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper	Const & Decom	Oper					
Planning Policy	Black				Light Blue																																
Population & Human Health			Black																																		
Biodiversity					Black																																
Bat Ecology							Black																														
Ornithology									Black																												
Aquatic Ecology											Black																										
Soils & Geology													Black																								
Hydrology and Hydrogeology															Black																						
Landscape & Visual																																					
Noise																																					
Material Assets																																					
Cultural Heritage																																					
Traffic and Transport																																					

Table 21.2: Interactions & Inter-relationships between Environmental Aspects of the Project

Interaction	Description
Population and Human Health & Hydrology and Hydrogeology & Aquatic Ecology	<p>Potential effects on water supply and recreational fisheries, particularly from flood risk and contamination, have been assessed in Chapter 11: Hydrology and Hydrogeology. These risks are considered to be Not Significant, in line with mitigation measures.</p> <p>The Project will implement measures to avoid pollution of surface water and groundwater, ensuring that no adverse impacts occur on population and human health. The Construction Environmental Management Plan (CEMP) (Appendix 2.1) outlines the specific procedures and controls that will be in place to manage potential contamination during construction.</p> <p>From a cumulative perspective, no significant effects have been identified when the Project is considered alongside existing or proposed developments in the Study Area. Potential cumulative impacts, such as a reduction in water resources, are also assessed as Not Significant.</p> <p>Sediment and other potential contaminants from construction activities have the potential to affect downstream waterbodies and aquatic ecology. However, these risks will be minimised through a drainage design that incorporates water quality protection, using assimilative capacity in receiving waterbodies as a final safeguard. Additionally, any contaminants will be removed during the abstraction and treatment of drinking water, ensuring public safety.</p> <p>An assessment of private wells within 1km of the Wind Farm Site was completed, in which a number of private dwelling houses were identified along the local roads in the lands surrounding the Wind Farm Site. However, given the significant distances which exist between local dwellings and proposed infrastructure locations, local topography and prevailing groundwater flow directions, there is no potential for effects on groundwater well supplies.</p> <p>Further details on the hydrological and hydrogeological assessments, along with proposed mitigation measures, are provided in Chapter 10: Soils and Geology and Chapter 11: Hydrology and Hydrogeology, and in Appendix 2.1 of this EIAR.</p>
Population and Human Health & Noise and Vibration	<p>No Significant noise effects on population and human health receptors are anticipated during the construction, operation, or decommissioning phases of the Project. As a result, no specific noise mitigation measures are required. However, general good practice for construction noise control, as set out in BS 5228, will be followed. Construction and Decommissioning activities will be limited to the working hours defined in BS 5228 and any additional conditions specified in the relevant planning permissions.</p> <p>The cumulative effects assessment confirms that the Project, when considered in combination with other existing or proposed developments in the Study Area, will not result in significant cumulative noise effects on population and human health receptors.</p>
Population and Human Health & Landscape and Visual Assessment	<p>The construction phase of the Project will see a temporary introduction of machinery and the erection of 11 no. turbines into a natural but already modified landscape. Chapter 12: Landscape and Visual Assessment assessed the landscape effects, the visual effects and the cumulative effects of the Project, including assessment from recreational scenic viewpoints, and was also informed by the findings of the assessment. The interactions between the environmental aspects were carefully considered in the EIAR, particularly in the design of the turbine layout. Detailed zone of theoretical visibility maps (ZTVs), route screening analysis and photomontages were prepared to assess the level of impact.</p>

Interaction	Description
	<p>Based on the findings of the collective assessments it is considered that the Project will not give rise to any significant effects, either singly or in combination.</p> <p>Tourists to Ireland have become accustomed to the vision of wind turbines on the landscape and given the scenario where more windfarms will be built in Ireland in the future, the most widely held view is that this will not impact their likelihood to visit the area again, as discussed in Chapter 5: Population and Human Health.</p>
<p>Population and Human Health & Material Assets and Other Issues:</p> <ol style="list-style-type: none"> 1. Shadow Flicker 2. Air Navigation 3. Telecommunications 4. Socio-economic 	<p>The Project is expected to provide opportunities for local suppliers during the construction phase, representing a minor beneficial effect. The Developer is committed to securing positive outcomes for the local and regional economy by prioritising the engagement of local labour, manufacturers, and suppliers wherever feasible. Operating wind farms can pose potential risks to aviation, particularly where turbine blade movement may interfere with radar operations, or where the physical height of turbines could obstruct flight paths or affect the performance of communications, navigation, and surveillance equipment.</p> <p>Structures over 150m in height are required to have aviation warning lighting. The Project has been designed in compliance with Irish Aviation Authority (IAA) Safety Regulations and ICAO Annex 15. The following measures will be implemented:</p> <p>Installation of aeronautical obstacle warning lights as specified by the IAA.</p> <p>Provision of precise ground and tip height coordinates for each Wind Turbine location.</p> <p>Notification to the IAA of the intention to commence crane operations at least 30 days in advance of erection.</p> <p>Pre-construction consultation with both the IAA and Irish Air Corps (IAC) to agree on lighting specifications.</p> <p>As a result of these measures, no significant impacts on human beings or air navigation are predicted.</p> <p>Wind turbines may interfere with electromagnetic signals both above and below ground. During the operational phase, overground signals such as microwave and telecommunication links could potentially be affected due to the scale and movement of the Wind Turbines. During construction and decommissioning, underground infrastructure, including business radio, fibre cables, and communication lines, may be temporarily affected.</p> <p>To mitigate these risks, potential electromagnetic and telecommunication effects were addressed during the design phase through:</p> <p>Consultation with stakeholders during the EIA scoping stage.</p> <p>Scoping Feedback:</p> <p>Responses from Vodafone, Eir, Towercom and RTE stated that either they had no communication links in the area or that they did not anticipate any impact from the Project. No responses were received from Three, BT, Enet, and ESB.</p> <p>All electrical systems and components will comply with the EMC Directive 2014/30/EU, ensuring that electromagnetic emissions do not interfere with other equipment. Electromagnetic fields (EMFs) generated by construction tools, the Grid Connection route, and Onsite Substation infrastructure will be highly localised.</p> <p>EMF-related effects are considered imperceptible, negative and short-term during construction and decommissioning phases.</p> <p>During operation, effects are considered imperceptible, negative, and long-term.</p> <p>Given that only effects of "Significant" or greater are considered significant under the EIA Directive, the potential effects of the Project as a result of EMFs are considered Not Significant.</p>

Interaction	Description
	<p>The Shadow Flicker assessment, found in Chapter 17: Shadow Flicker, has identified the potential for shadow flicker to affect 117 out of 145 sensitive receptors within the shadow flicker Study Area. Of these, 45 sensitive receptors exceed 30 minutes within 24 hours according to the Worst-Case Scenario under the 2006 Guidelines, with no sensitive receptors also surpassing 30 hours of shadow flicker per year in the 'real case' scenario. It is proposed that a shadow control system be installed to mitigate the potential for adverse shadow flicker from the Project. This assessment has identified that by installing a blade shadow control system on the proposed Wind Turbines, there will be no significant direct or indirect effects. Given that only effects of significant impact or greater are considered "significant" in terms of the EIA Directive the potential effects of the Project as a result of shadow flicker, when mitigated, are considered to be not significant. The Project has been assessed as having the potential to result in adverse, imperceptible, long-term effects overall with regards to shadow flicker. There are no predicted cumulative effects.</p> <p>No significant impacts are anticipated in relation to human health, telecommunications, or air navigation due to the Project.</p>
<p>Population and Human Health & Cultural Heritage</p>	<p>Potential impacts on cultural heritage assets and tourism have been carefully assessed in Chapter 15: Cultural Heritage. The assessment concludes that no significant effects are anticipated, ensuring that the Project will not result in substantial impacts on tourism or the cultural heritage of the area.</p> <p>A total of 71 Cultural Heritage sites were identified within the Study Area of the Project, 51 sites are located within 2km of the proposed Wind Turbines and 20 sites within 50m of the Grid Connection.</p> <p>Besides the National Monuments associated with Rathcroghan Archaeological Complex (AH1) there are two National Monuments located within the 10km Study Area of the Project. These comprise a High Cross (AH2, Nat Mon No. 608), c. 1.15km to the west, and Ringfort and Ogham Stone (AH3, Nat Mon No. 650), c. 1.97km south-southwest.</p> <p>Mitigation measures to protect archaeological within the Wind Farm Site can be found in Chapter 15: Archaeology and Cultural Heritage.</p>
<p>Population and Human Health & Air Quality & Climate</p>	<p>Potential effects on air quality during the construction and Decommissioning phases of the Project may arise from dust emissions associated with onsite activities and increased traffic-related exhaust emissions. These interactions were assessed as part of the EIAR, and no significant effects were predicted. Appropriate mitigation measures will be implemented to further reduce potential impacts. While there may be small, localised increases in emissions during construction, particularly during peak activity periods from months 2 to 10, when up to 44 daily HGV deliveries and 120 additional concrete pour deliveries (on nine separate days) are expected, these will result in slight, adverse, and short-term effects only.</p> <p>Traffic-related impacts, as outlined in Chapter 16: Traffic and Transport, include approximately 8,983 HGV delivery and removal loads over the construction period, mainly concentrated in the first six months for the construction of the Site Access Roads, Turbine Foundations, and associated infrastructure. With mitigation in place, no significant direct or indirect effects on air quality are anticipated during the construction or Decommissioning phases.</p> <p>Ambient air quality in the region is currently within acceptable limits. The nearest National Ambient Air Quality Monitoring Station is located in Roscommon Town, Co. Roscommon, approximately 25.7 km south-east of the Wind Farm Site. Monitoring data from 2024 indicate that the mean guidelines for PM_{2.5} and PM₁₀ were not breached, annual mean PM₁₀ and PM_{2.5} levels for Roscommon were 10.2 µg/m³ and 6.6 µg/m³, respectively, both below the limit values set out by Directive 2008/50/EC</p> <p>During the operational phase, the Project will contribute to offsetting greenhouse gas emissions by replacing fossil fuel-based electricity generation with renewable energy.</p>

Interaction	Description
	<p>This will have a net positive effect on climate and, in turn, will likely reduce adverse effects of climate change on human health and wellbeing.</p> <p>The cumulative effect of the Project, in combination with other renewable energy developments in Ireland, represents a fundamental shift in the climate impacts of the national energy supply. This is considered a Significant positive effect under the EIA Regulations and contributes meaningfully to Ireland's binding greenhouse gas emission reduction targets.</p> <p>In summary, the Project is not expected to give rise to any significant adverse effects on air quality during its construction, operation, or Decommissioning phases. On the contrary, it will have a significant beneficial impact on climate over its operational lifetime.</p>
<p>Population and Human Health & Traffic and Transport</p>	<p>The construction and Decommissioning phases of the Project will involve the movement of abnormal loads, which may result in short-term inconvenience for road users. To minimise disruption and ensure safe, efficient coordination of transport activities, a comprehensive Traffic Management Plan (TMP) will be implemented.</p> <p>As detailed in Chapter 16: Traffic and Transport, approximately 8,983 HGV deliveries and removals are expected over the course of construction, with the majority occurring in the first six months during the development of Site Access Roads, Turbine Foundations, and associated infrastructure.</p> <p>With mitigation measures in place, no significant direct or indirect effects on air quality are anticipated during either the construction or Decommissioning phases.</p> <p>Measures to manage dust emissions and other potential nuisances—including road safety protocols, are also outlined in Chapter 16, and Appendix 16.2, ensuring impacts on nearby communities and the environment remain minimal.</p> <p>From a cumulative impact perspective, no significant effects are anticipated from construction traffic associated with the Project in combination with other regional developments.</p> <p>The Project is located close to the national and regional road network with links to the N5 National primary road. The results of the traffic analysis in Appendix 16.1 show that the road and junction network will continue to operate with reserve capacity during construction, operation and Decommissioning of the Project.</p>
<p>Biodiversity</p>	<p>All interactions for any habitat or species including those associated with Special Protection Areas (SPA) or Special Areas of Conservation (SAC) are considered in the Natura Impact Statement and not considered further here.</p>
<p>Biodiversity & Ornithology & Soils and Geology</p>	<p>Potential impacts on biodiversity during the construction and Decommissioning phases may include disturbance to birds and mammals resulting from habitat loss or alteration. Several sensitive habitat types could be affected, none of which are Annex I. These include:</p> <ul style="list-style-type: none"> • Wet Grassland • Cutover Raised Bog • Wet Willow-Alder-Ash Woodland • Scrub • Hedgerow <p>Wherever possible, impacts will be avoided or minimised through careful planning and construction practices. In addition, habitat restoration and enhancement measures will be implemented in line with the Biodiversity Enhancement Management Plan (BEMP) (Appendix 6.1), supporting the long-term protection and recovery of affected areas.</p>
<p>Biodiversity &</p>	<p>Potential contamination of surface water and groundwater could arise from various elements of the Project, including wastewater sanitation, hydrocarbon spills, construction of watercourse crossings, and the entrainment of suspended solids during</p>

Interaction	Description
Hydrology and Hydrogeology	<p>earthworks. Other sources of contamination may include increased pollutant transport due to local stability issues. Such contamination could adversely affect water quality, impacting flora and fauna, including fisheries, otters, lizards, amphibians (e.g., loss of breeding ponds), and other sensitive species.</p> <p>The mitigation proposed to maintain water quality in the watercourses which drain the area of the Project are detailed in Chapter 6: Biodiversity, Chapter 9: Aquatic Ecology, in Chapter 11: Hydrology and Hydrogeology, and in Appendix 2.1: CEMP.</p> <p>These interactions have been thoroughly considered in the EIAR. Mitigation measures outlined in Chapter 11: Hydrology and Hydrogeology and Chapter 9: Aquatic Ecology will be implemented to reduce potential effects on biodiversity receptors. With these measures in place, the significance of impacts on water quality and associated ecosystems will be minimised to a low or negligible level.</p>
Aquatic Ecology & Hydrology and Hydrogeology	<p>There is a potential for aquatic ecology to be affected by a disturbance or contamination of watercourses during the construction period if the stated mitigation measures are not adhered to. However, the mitigation measures to protect watercourses outlined in Chapter 9: Aquatic Ecology, Chapter 10: Soils and Geology and Chapter 11: Hydrology and Hydrogeology will be strictly adhered to which includes monitoring of water run-off during all phases of the Project.</p>
Soils and Geology & Hydrology and Hydrogeology	<p>During the design phase, the EIA team adopted a "mitigation by avoidance" strategy to minimise potential impacts on the site's hydrogeological balance. This approach focused on optimising the layout of turbines and associated infrastructure to reduce the volume of earth materials requiring excavation.</p> <p>To further limit disturbance, best practice measures will be applied throughout construction, including proactive planning and real-time monitoring in sensitive areas, particularly those with peat depths exceeding 1 metre. These efforts aim to mitigate ground disturbance during excavation and maintain site stability.</p> <p>Direct impacts on geological attributes and soil properties are expected to be localised, mainly limited to soil excavation, storage, and reuse as backfill. However, indirect impacts, such as the mobilisation of contaminants via water runoff—have the potential to affect ecological and hydrological receptors.</p> <p>These potential effects were carefully assessed in the EIAR. Appropriate mitigation measures, as outlined in Chapter 10: Soils and Geology, have been developed to:</p> <ul style="list-style-type: none"> • Minimise the risk of ground instability • Prevent contamination spread • Protect local hydrology and hydrogeology <p>Through the implementation of these measures, any impacts on hydrological and hydrogeological receptors are expected to be negligible.</p> <p>The final Project layout reflects a careful balance between engineering requirements and the need to preserve the site's geotechnical and hydrological integrity, while also avoiding other environmental and ecological sensitivities.</p>
Soils and Geology & Landscape and Visual Assessment	<p>The total land-take of the Project, including the Site Access Roads, Turbine Hardstands, Turbine Foundations, Grid Connection, Turbine Delivery Route nodes and Onsite Substation is 10.84 hectares. The EIAR Boundary is 1,040 hectares therefore the total land take is 1.04%.</p> <p>To minimise soil disturbance, exposed ground and soil stockpiles will be kept to a minimum, and any stockpiles left for an extended period will be allowed to revegetate naturally as part of the landscaping and erosion control strategy.</p>

Interaction	Description
	<p>Some small areas beyond the primary infrastructure footprint may be temporarily affected for drainage, storage, or levelling, but these will also be restored post-construction.</p> <p>Overall, the interrelationship between Soils and Geology and Landscape and Visual impacts has been assessed, and no likely significant effects are anticipated.</p>
<p>Soils and Geology & Archaeology and Cultural Heritage & Landscape and Visual Assessment</p>	<p>The construction and Decommissioning phases of the Project will involve significant ground disturbance and topsoil removal across the Project footprint. While no direct adverse impacts are anticipated on known archaeological sites, protected structures, or undesignated cultural heritage features, there remains the potential for the discovery of previously unrecorded sub-surface archaeological remains during earthworks.</p> <p>These potential interactions have been thoroughly assessed in Chapter 15: Archaeology and Cultural Heritage of the EIAR, which informed the turbine layout design and the development of appropriate mitigation measures.</p> <p>A total of 71 Cultural Heritage sites were identified within the Study Area of the Project, 51 sites are located within 2km of the proposed turbines and 20 sites within 50m of the Grid Connection.</p> <p>Besides the National Monuments associated with Rathcroghan Archaeological Complex (AH1) there are two National Monuments located within the 10km Study Area of the Project. These comprise a High Cross (AH2, Nat Mon No. 608), c. 1.15km to the west, and Ringfort and Ogham Stone (AH3, Nat Mon No. 650), c. 1.97km south-southwest.</p> <p>UNESCO includes a tentative list of potential properties to be added to the World Heritage Property (WHP) list. One of these sites is located within 10km of the Proposed Project and comprises the Rathcroghan Archaeological Complex. The closest section of the Record of Monuments and Places (RMP) boundary for Rathcroghan is located c.3.2km southeast of Wind Turbine 7 (AH1).</p> <p>It is concluded that the Project would result in a negligible degree of change upon two attributes of the WHP as presented in Appendix 15.1 Table 2 (Hill top location with excellent visibility 'in and out' and 'Other archaeology') resulting in a minor negative impact on potential Outstanding Universal Value (OUV). All other attributes of the Rathcroghan that convey potential OUV would remain unaffected.</p> <p>Scenic views and routes in County Roscommon that fall within the Study Area, are considered relevant. Those that fall within the Study Area include Scenic Views 3-16, and 26, and Scenic Routes R3-R6.</p> <p>Overall, whilst views from these locations and routes are considered notable and with scenic value; they are strongly influenced by an underlying landscape context that is typical of a working, rural landscape that is widely influenced by anthropogenic land use.</p> <p>Although no direct impacts on known archaeological features are expected, the possibility of encountering unknown sub-surface remains. To manage this:</p> <p>Archaeological monitoring, including a watching brief, will be carried out in previously undisturbed areas.</p> <p>If archaeological material is uncovered, it will be cleaned, recorded, and preserved in situ within clearly demarcated 'no-go' zones.</p> <p>The National Monuments Service will be notified, and mitigation strategies, such as preservation by record (excavation) or preservation in situ (avoidance), will be implemented as appropriate.</p> <p>All findings will be fully documented and reported to the National Monuments Service, the National Museum of Ireland, and the Planning Authority.</p>

Interaction	Description
	<p>During the operational phase, no significant or likely direct impacts on cultural heritage are anticipated. Additionally, the interrelationships between Soils and Geology, Cultural Heritage, and Landscape and Visual receptors have been assessed and found to result in no likely significant effects.</p>
<p>Noise & Traffic and Transportation</p>	<p>Traffic and Transportation will create noise onsite and along the Site Access Roads. Site contractors will be required to employ the best practicable means of reducing noise emissions from plant, machinery and activities, as advocated in BS 5228. Such potential effects are considered to be not significant.</p>
<p>Landscape and Visual Assessment & Material Assets and Other Issues & Traffic and Transportation</p>	<p>Land Use</p> <p>Implementation of the mitigation measures, outlined at the design stage will ensure that residual effects on agricultural land use will be slight adverse and temporary for the duration of the construction and negligible for the operational lifespan of the Project.</p> <p>For the Decommissioning phase, the residual effect will be slight adverse and temporary for the duration of the phase.</p> <p>All existing access points (i.e., to domestic premises, business, farms) are accessible during temporary road closures and diversions. This is to maintain local access and avoid effects on other various land uses. Chapter 16: Traffic and Transport refers to all proposed temporary works and deliveries along the TDR to avoid undue effect to adjacent land uses. This is also considered for the Decommissioning phase for which traffic will be required along the Construction Haul Route. During the operational phase of the Project, the TDR will no longer be needed except in such cases where a blade or other component may be required to be replaced. The turbine delivery and maintenance requirements process are further detailed in Chapter 2: Project Description. For the Decommissioning phase, the TDR will no longer be needed. This is further detailed in Chapter 2: Project Description.</p> <p>Thus, the residual effect on surrounding land uses is slight during construction and Decommissioning and negligible during the operational phase and will therefore not be significant.</p> <p>Due to the localised nature of the proposed construction, Decommissioning works, there is no potential for significant cumulative effects in-combination with other local developments on the land use as all effects are directly within the Wind Farm Site.</p> <p>Other projects outside the Wind Farm Site do not have the potential to reduce or increase the magnitude of effects of the Project on land use within the Wind Farm Site. Therefore, this will not contribute to any significant cumulative effects during the construction, Decommissioning or operational phases.</p> <p>Land management practices in the wider area which are considered to have potential for cumulative effects with the Project are primarily agriculture, forestry and historic peat cutting sites. All existing and approved projects in Appendix 2.4 were considered. The N5 Ballaghaderreen to Scramoge road project is located to the south of the Project, although the N5 project is planned to be completed prior to the construction of the Project</p> <p>The nearest operational wind farm is Roosky wind farm which is located 13.6km to the north-west of the Wind Farm Site. The nearest permitted but not yet constructed wind farm is Leam wind farm 6.8km to the north, north-east.</p> <p>No significant effects are predicted on land use within or outside of the Wind Farm Site.</p> <p>Telecommunications</p> <p>There is no likely significant effect associated with the interaction of telecommunications and the landscape.</p>

Interaction	Description
	<p><u>Electricity Network</u></p> <p>There are no likely significant effects associated with the interaction of the electricity network and the landscape.</p> <p><u>Air Navigation</u></p> <p>The Irish Aviation Authority (IAA) has outlined criteria regarding tall structures and the installation of an aeronautical obstacle warning light scheme for the Project. This has been addressed in Chapter 14: Material Assets and Other Issues.</p> <p>No significant effects are predicted in terms of air navigation. In adherence to IAA Safety Regulations and International Civil Aviation Organisation, ICAO Annex 15, aeronautical obstacle warning light schemes will be installed as requested by IAA. Co-ordinates of ground and tip height elevations at each Wind Turbine location as constructed will be provided to the IAA. IAA will be notified of the provision of the intention to commence crane operations within a minimum of 30 days prior to erection.</p> <p>The potential effects of the Project on air navigation are considered not significant.</p> <p>There are no likely significant effects associated with the interaction of air navigation and the landscape.</p> <p><u>Quarries</u></p> <p>No significant adverse effects on local quarries are anticipated. There will be a slight, permanent, adverse residual effect on natural resources in the area from the construction phase. There will be no impacts during either the operational or Decommissioning phases. This effect is considered to be imperceptible in the long-term and therefore not significant.</p> <p>The quarries used will be well established and therefore, there are no likely significant effects associated with the interaction of the use of quarries as a source for raw materials and the landscape.</p> <p><u>Utilities</u></p> <p>There are no likely significant effects associated with the interaction of water infrastructure; or waste and the landscape.</p>
<p>Traffic and Transport & Aquatic Ecology</p>	<p>Traffic and transportation activities associated with the construction phase will result in increased noise levels both onsite and along Site Access Roads. However, Site contractors will be required to implement best practicable means to reduce noise emissions from plant, machinery, and construction activities, in accordance with BS 5228 guidelines. With these controls in place, potential noise effects are assessed as Not Significant.</p> <p>Additionally, increased vehicle movements during construction could cause disturbance to soil and lead to sedimentation or pollution of nearby watercourses. These potential interactions were thoroughly assessed in the EIAR. Mitigation measures have been incorporated into the Project design, including sediment control measures and appropriate drainage systems.</p> <p>Following this assessment, no significant residual effects on fisheries or water quality arising from traffic and transport activities have been identified.</p>