

Moyvannan Electricity Substation

Environmental Impact Assessment Report

Non-Technical Summary

Energia Renewables ROI Limited

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1.0 Introduction

Energia Renewables ROI Limited ('the Developer') is applying for planning permission for the construction of a 110kV electricity substation comprising an enclosed compound containing a control building and 110kV electrical equipment together with two single circuit interface masts which will connect to the existing Athlone-Lanesborough 110kV overhead electricity transmission line; and approximately 7.5 kilometres (km) of underground 110kV electricity line.

The project will form part of a wind farm development (known as the 'Seven Hills Wind Farm') located in County Roscommon; which has previously been permitted by An Bord Pleanála; and will allow for electricity generated by the wind farm to be exported to the national electricity grid. Given that the project and the Seven Hills Wind Farm are inter-related; both projects are likely to be constructed simultaneously.

Planning legislation requires that that planning applications for such projects be accompanied by an EIAR. An EIAR is a statement of the effects, if any, which the project, if carried out, would have on the environment. It provides information which a planning authority, in this case An Bord Pleanála ('the Board'), can use in undertaking a formal Environmental Impact Assessment (EIA) and in informing their decision making process. The EIAR can also be used by third parties to evaluate the project and its likely effects.

Galetech Energy Services (GES) has been appointed by the Developer to manage and co-ordinate the management and preparation of this EIAR. The content of the EIAR has been prepared by individual specialist and technical consultants who were appointed in order to undertake assessments and prepare chapters on specific environmental topics.

Volume I of the EIAR is arranged in 13 no. separate chapters which describe the project and addresses each component of the environment likely to be affected and their likely interactions. **Volume II** includes technical information and annexes associated with the EIAR.

A submission or observation in respect of the EIAR and the planning application may be made in writing to the Board; at 64 Marlborough Street, Dublin 1, D01 V902 or via the Board's website www.pleanala.ie/en-ie/observations; on payment of the €50 prescribed fee within the period of seven weeks and such submissions or observations will be considered by the Board in making the decision on the planning application.

2.0 Site Location

The project is located in rural County Roscommon; approximately 8 kilometres (km) northwest of Athlone, c. 6km south of Lecarrow and immediately north/northeast of Brideswell. The electricity substation will be located within the townland of Moyvannan with the underground electricity line, connecting the project to the permitted Seven Hills Wind Farm grid connection infrastructure, located within the townlands of Moyvannan, Feamore, Lisbaun, Carrownolan, Carrowncloghan, Carrowkeeny, Ardmullan, Curraghboy, Gortnasythe, Derryglad, Eskerbaun, and Brideswell, Co Roscommon. The underground electricity line will, from the electricity substation, be located within private lands and within the L7551, L7556, L2018, L7731, R362, L2023, and L7636 to its junction with the R363.



Moyvannan Electricity Substation



Figure 1: Project Location



Figure 2: Overall Site Location



The wider environs of the project site are characterised by small settlements; such as Brideswell, Kiltoom and Curraghboy; with one-off rural dwellings and agricultural holdings located along the majority of public roads in the area. The public road network is predominately characterised by a network of single-carriageway local roads while a number of regional roads (e.g. the R362 and R363) traverse the wider landscape. The N61 national secondary road, located c. 700m to the east of the project site, is the dominant transport corridor in the immediate environs of the project site; while the M6/N6 corridor is located c. 4km to the south. The railway line between Dublin and Westport is located c. 2km to the east while the line between Dublin and Galway is also located c. 6.5km to the south.

The project site, and surrounding topography, are typical of this region and comprise a generally flat landscape with occasional gentle undulations, with ground elevations at the site of the proposed electricity substation ranging between 69 metres (m) and 80m above sea level. Ground elevations along the electricity line route generally range between approximately 55m and 95m. To the east of the project site, the terrain generally slopes towards the shores of Lough Ree; while, to the north, west and south, there are a number of turloughs, including Lough Funshinagh, which indicate the presence of localised depressions in the landscape.

Current land use at the electricity substation site comprises agricultural pasture with the wider environs of the site also predominately agricultural pasture. Small pockets of forestry and areas of scrub are also present in the wider landscape, particularly along the shores of Lough Ree.

There are no natural watercourses within the electricity substation site while the underground electricity line will traverse 1 no. watercourse, namely the Cross (Roscommon) River. The primary drainage feature within the wider landscape is the River Shannon (including Lough Ree) which flows in a southerly direction approximately 2.5km to the east.



Figure 3: General View across the Project Site



3.0 Description of the Project

The project assessed within this EIAR comprises a 110kV electricity substation; including all associated development works to accommodate its construction, operation, maintenance and the export of electricity to the national grid via the existing Athlone-Lanesborough overhead electricity transmission line; and c. 7.5km of underground electricity line. This will include:-

- A 110 kV 'loop-in/loop-out' Air-Insulated Switchgear (AIS) electricity substation, including a single-storey control building (with a Gross Floor Area of 450m²); busbars, insulators, cable sealing ends, and lightning poles within a secure compound (with a total footprint of 8,400m²);
- Replacement of 1 no. existing wooden pole-set with 2 no. lattice-type interface masts, each of which will be between 15m and 18m in height, to facilitate connection of the electricity substation to the existing Athlone-Lanesborough 110kV overhead electricity transmission line;
- Approximately 270m of 110kV underground electricity line between the electricity substation and the interface masts;
- Approximately 630m of on-site access tracks with associated upgrade works to an existing agricultural entrance from the L7551;
- Approximately 7.5km of 110kV underground electricity line between the electricity substation and the junction of the L7636 local road and R363 regional road where the electricity line will connect to grid connection infrastructure permitted as part of the Seven Hills Wind Farm (An Bord Pleanála Reference ABP-313750-22). The electricity line will be placed within private lands and within the carriageways of the L7551, L7556, L2018, L7731, R362, L2023, and L7636; and,
- All associated and ancillary site development, excavation, construction, landscaping and reinstatement works including a temporary construction compound and the provision of site drainage infrastructure and surface water protection measures.

A typical 110kV substation is illustrated at Figure 4.





Figure 4: Typical 110kV Electricity Substation

4.0 Assessment of Project Alternatives

A description of the reasonable alternatives to this project has been provided detailing the assessment, evaluation and analysis undertaken. A range of alternate development options have been assessed through an iterative project design and environmental assessment process, including alternative substation locations, substation designs, electricity line routes and construction material delivery routes. The objective of this process was to arrive at a project, which has inherent design characteristics, which has the least likely adverse environmental effects.

The final project evaluated in this EIAR has been selected as it strikes the best balance between the avoidance of any adverse environmental effects and achieving the objectives of the project.

5.0 Population & Human Health

5.1 Background

This chapter presents an assessment of the likely and significant effects of the project on population and human health. Human beings comprise a significant and important environmental factor which must be comprehensively assessed. This includes effects on the existence, activities and wellbeing of people, including the local population.

5.2 Methodology

The methodology used to inform the assessment generally comprised research of existing documents and information sources to fully understand the population, social and economic characteristics of the local area. Information sources included information from the 2022 National Census, local economic and community plans and tourism information for County Roscommon.



Consultation was also undertaken with a range of bodies including Failte Ireland, Roscommon County Council, the Health and Safety Authority and Health Service Executive.

5.3 Existing Environment

The assessment of the existing environment found that County Roscommon comprises 1.4% of the total Irish population figures. The Census data also showed that professional occupations are the most common occupations while the county had a relatively low level of unemployment during the 2022 Census.

Recent data from Failte Ireland demonstrates that County Roscommon, as part of the 'West' region, has a relatively vibrant tourism industry with substantial revenues being generated from tourism.

5.4 Description of Likely Effects

The assessment finds that the likelihood of effects during the construction phase are limited to effects on population sustainability, general amenity and well-being, economic and employment effects, effects on tourism, and the possibility of accidents or natural disasters. The assessment concludes that the project will result in both negative and positive effects on the above factors; however, the level of significance is at the lower end of the spectrum.

For example, amenity levels, in terms of local population, are likely to be subject to a minor adverse effect for the temporary duration of the construction phase; however, while these effects may be substantial at a personal level, they are not assessed to be significant in EIA terms, particularly given their short-term temporary duration.

Economic opportunities, through the provision of materials or services by local companies during the construction phase is likely to involve the employment of up to approximately 40 no. people over a period of c. 18-months. Additionally, plant and materials will be sourced locally. The socio-economic benefits resulting from the construction and operation of the project are likely to make a substantial positive effect on the local economy of the local area, through direct employment and rural diversification.

The operational phase of the project is not likely to result in any significant positive or negative effects in terms of population sustainability and residential amenity, general amenity and well-being, economic and employment effects and effects on tourism. While minor localised effects are likely to arise, both positive and negative; these effects are not assessed as likely to be significant.

5.5 Mitigation Measures

A series of measures has been agreed with the involved landowner regarding the management of agricultural activities during the construction phase to ensure the sustainability of agri-business; however, no further measures are required during the construction phase. All necessary health and safety requirements will be implemented in full.

During the operational phase, the project will generally be unmanned. Operational monitoring activities will be carried out, remotely, on an ongoing basis. However, regular visits to the site will be undertaken for routine inspections and maintenance.

5.6 Overall Findings



The overall conclusion of the chapter is that any adverse effects of the project on population and human health are unlikely to be significant. No specific mitigation measures, other than full adherence to all health and safety and public health guidance, have therefore been identified as being required.

6.0 Biodiversity

6.1 Background

The chapter provides an assessment of the likely significant effects on biodiversity, including flora and fauna, as a result of the construction and operation of the project.

6.2 Methodology

A comprehensive desk study was undertaken to inform this ecological impact assessment involving a thorough review of available information that is relevant to the ecology of the project site. Field surveys were undertaken by appropriately qualified ecologists between October 2023 and May 2024. These surveys applied best practice guidelines, as required for ecological assessment.

Surveys undertaken included:-

- Extended habitat survey to map habitats within the and adjacent to the project site, and search for terrestrial mammals (including bats), invertebrates, amphibians, reptiles and plants (including invasive and non-native species);
- Aquatic assessments; and,
- Bird surveys encompassing the project footprint and wider area:-
 - Wildfowl and wader feeding distribution surveys; and,
 - Breeding bird surveys.

Ecological surveys for the project were undertaken following specific guidelines for habitats and species and with reference to the relevant national legislation and policy. The importance of the habitats and species present, potential impacts and likely residual effects was evaluated using guidance documents published by the Chartered Institute of Ecology and Environmental Management and the Environmental Protection Agency.

6.3 Existing Environment

There are no nationally or European designated sites located within the project site.

In terms of habitats, the project site predominately comprises 'Improved Agricultural Grassland' and 'Buildings and Artificial Surfaces'; however, a number of other habitats were identified in the environs of the project site.

A total of 28 no. bird species were recorded during ornithological surveys at the project site. In general, the surveys during the non-breeding period recorded more species and a greater overall abundance of birds. The turloughs south and southwest of the electricity substation site were the most important habitats during this season. Species consistently recorded in this area during surveys included blackheaded gull, lapwing, teal, mallard and mute swan. In the breeding season, confirmed breeding was identified for coot *Fulica atra* present in the southern turlough and probable breeding for starlings *Sturnus vulgaris* at a housing development in Brideswell. A coot sitting on a nest was also seen late in the non-breeding season; however, this was in a separate location to the breeding coot



seen during breeding season surveys.

No non-volant mammals (i.e. either live sightings or other evidence) were recorded during the field surveys. The heavily grazed improved agricultural grassland fields and stone walls at the substation site do not afford suitable breeding, resting or foraging habitats for mammals. It is possible that mammals could use some habitats adjacent to the underground electricity line but these were not accessible for survey.

The substation site has a high bat landscapes suitability index for soprano pipistrelle. There is moderate suitability for brown long-eared bat, common pipistrelle, Daubenton's bat, Nathusius' pipistrelle, Natterers' bat, Leisler's bat and whiskered bat. The bat landscapes suitability index is classified as low for lesser horseshoe bat.

The route of the underground electricity line has a moderate bat landscapes suitability index for brown long-eared bat, common pipistrelle, Daubenton's bat, Leisler's bat, Natterers' bat and soprano pipistrelle. The bat landscapes suitability index is classified as low for lesser horseshoe bat, Nathuisus' pipistrelle and whiskered bat.

Neither common frog nor smooth newt were recorded during surveys. However, suitable habitat for both species is present in the form of turlough habitats, damp patches in fields and drainage ditches, particularly in the wider environs of the substation location and near the Cross [Roscommon] watercourse crossing.

No rare or protected macro-invertebrate species (according to national red lists) were recorded during surveys of the Cross (Roscommon) River. Biological surveys of the Cross (Roscommon) River recorded evidence of Brook Lamprey; but no evidence of Salmonids, European Eels or White-clawed Crayfish. Evidence of Otter was also identified.

6.4 Description of Likely Effects

There are no nationally or European designated sites located within the project site.

There is a potential downstream hydrological connection to River Shannon Callows SAC and Middle Shannon Callows SPA. There is a potential hydrogeological connection to Ballynamona and Corkip Lough SAC, Lough Ree SAC / SPA and Castlesampson Esker SAC. There is a potential ecological connection to Lough Ree SPA, River Suck Callows SPA, Suck River Callows NHA, and Cranberry Lough pNHA via mobile bird species, and to River Shannon Callows SAC via mobile otter.

The project footprint will be primarily located within agricultural grasslands and public roads. Turlough habitats listed under Annex I of the EU Habitats Directive were recorded nearby but outside of the electricity substation site.

No legally protected or threatened botanical species were recorded. Third Schedule invasive plant species Japanese knotweed was recorded nearby the electricity line route.

Bird surveys recorded a variety of bird species including raptors, waders and waterbirds: 28 no. species were recorded. In general, the turloughs south and southwest of the electricity substation site were the areas of greatest importance to birds, especially wintering wildfowl and waders.

No non-volant mammal species were recorded during surveys. Overall, the project site contains limited roosting opportunities for bats.



In the absence of appropriate environmental controls, monitoring and mitigation, there is a likelihood of adverse effects upon biodiversity features of importance.

The construction phase is identified as requiring the greatest degree of active environmental control. In the absence of mitigation, there is a likelihood of significant negative effects on designated sites, Annex I turlough habitats, and local aquatic ecology due to run-off of sediment and other potential contaminants to hydrologically connected watercourses and groundwater bodies.

The constructions works are also likely to result in some localised displacement and disturbance of wintering wildfowl and wader species.

The likelihood of operational phase effects upon habitats and species is also assessed. In general, significant operational effects on habitats and species are not likely.

6.5 Mitigation Measures

From the outset, an iterative process of constraints-led design was employed for the project whereby independent ecological expertise was utilised at an early design stage in identifying the constraints and designing the site layout to take account of these constraints.

Mitigation measures, required to prevent adverse effects on downstream Natura 2000 sites are outlined in the Natura Impact Statement (NIS) for the project. The mitigation measures relate to protection of water quality flowing into the identified designated sites via the Cross [Roscommon] River. A detailed Construction and Environmental Management Plan (CEMP) presents detailed environmental controls to ensure best practice guidelines are implemented. If these measures are implemented in full, they will ensure that adverse effects on these Natura 2000 sites are avoided. These measures will also protect water quality locally within the watercourses draining the project site and therefore avoid any likely significant effects on local aquatic ecology, or groundwater-dependent turloughs.

Mitigation measures to reduce the significance of effects on other ecological features will be implemented. An Ecological Clerk of Works (ECoW) will be appointed to oversee the implementation of the construction phase mitigation. An invasive species management plan will be developed and implemented to avoid the spread of invasive plants. Temporary acoustic and visual barriers will remain in place to avoid disturbance to wintering birds using nearby turloughs.

No hedgerow or trees will be felled and all disruption to habitats outside of the construction footprint will be minimised. Pre-construction surveys will be carried out to ensure that the risk of disturbance of any protected species is minimised and that all vegetation clearance and construction works will be carried out in accordance with the mitigation recommendations, relevant guidance and legislative requirements.

Construction phase monitoring includes surveys for wintering wildfowl and wading.

6.6 Overall Findings

The mitigation measures described above have been designed to minimise the effect of the project on ecological receptors. The constraints-led design approach followed has been effective in identifying and, insofar as possible, avoiding likely effects to the receiving environment.



The ecological impact assessment has fully assessed the likelihood of adverse effects of all aspects of the project on the species and habitats in the receiving environment. Overall, it is assessed that the detailed monitoring and mitigation commitments will be effective in ensuring that there are no likely significant residual effects on biodiversity.

Separately, the Natura Impact Statement (NIS) has fully assessed the potential impacts of the project, on its own and in combination with other projects and plans, on designated Natura 2000 sites in the wider receiving environment. The implementation of detailed mitigation commitments will ensure that there are no significant effects on any European-designated nature conservation site.

7.0 Land & Soils

7.1 Background

The chapter comprises an assessment of the effect of the project on land and soils. The assessment provides a baseline assessment of the setting of the project in terms of the geological environment, and discusses the likely direct, indirect, and cumulative effects arising from the construction, operation and decommissioning of the project.

7.2 Methodology

The geological characteristics of the project site have been assessed using a combination of desk study and site investigation data. Several walkover inspections of the electricity substation site have been completed as well as intrusive site investigations comprising of 5 no. trial pits and 6 no. boreholes. A visual assessment of exposed soils, subsoil and bedrock and topographic changes along the underground electricity line was also completed.

7.3 Existing Environment

The project site is located in rural County Roscommon, c. 8km northwest of Athlone town and c. 8km east of the permitted Seven Hills Wind Farm. The electricity substation is proposed in the townland of Moyvannan. The underground electricity line will extend southwards from the electricity substation and will be located within private lands and along the local road network as far the junction of the L7636 and the R363 in the village of Brideswell.

Topography is gently sloping gently towards the south, with ground elevations at the electricity substation site ranging between 69m and 80mOD. Ground elevations along the underground electricity line generally range between 49m and 80mOD, with the greatest elevation location in the north.

The electricity substation site currently comprises agricultural pasture fields with boundaries delineated by the presence of stone walls. Meanwhile, the underground electricity line is located largely within the public road network with a small section located within private lands in the immediate vicinity of the electricity substation.

Based on data gathered from the site investigations, the electricity substation site is overlain by a topsoil which is in turn underlain by cohesive clay deposits. Granular sands underly the clay deposits. The depth to competent bedrock was recorded as ranging from 4.05m to 12.2m. The local GSI mapped subsoils consist of glacial till derived from limestones with some areas of karstified limestone bedrock.



The bedrock encountered during the site investigations was described as predominantly competent (strong) limestones with some dolomite. No significant karst features were recorded at the substation site during the site investigations.

7.4 Description of Likely Effects

Volumes of spoil to be excavated at the electricity substation site and along the underground electricity line are estimated to be c. 14,010m³ and 11,240m³ respectively. Excavated soil at the electricity substation site will be used as fill or stored in the spoil deposition areas, with some material also being used for landscaping. The material excavated along the underground electricity line will be transported to an appropriately licenced facility.

Storage and handling of hydrocarbons/chemicals will be carried out using best practice methods. Measures to prevent peat and subsoil erosion during excavation and reinstatement will be undertaken to prevent water quality effects.

Due to the nature of the electricity substation site, i.e. sloping terrain with glacial subsoils, there is no risk of a landslide occurring. Whilst peat is present along c. 580m of the underground electricity line, walkover surveys and inspection of the underground electricity line in these areas identified no peat stability issues. The underground electricity line comprises of a 1.2m deep trench below an existing roadway, therefore there is a negligible likelihood of ground instability.

The project has a very small development footprint. Therefore, no significant effects on land will occur during the construction, operation or decommissioning phases of the project.

The peat and mineral soil/subsoil deposits at the project site are not designated in this area (i.e. they do not form part of a designated site). With the implementation of the mitigation measures detailed in this EIAR and the best practice measures detailed in the Spoil Management Plan, no significant effects on peat and soils will occur during the construction, operation or decommissioning phases of the project.

7.5 Mitigation Measures

A comprehensive suite of measures have been proposed to ensure the appropriate management of excavated material, the avoidance of erosion of exposed soil and the avoidance of soil contamination through leakages or spillages.

Where excess topsoil or subsoil material is generated which cannot be utilised for landscaping or reinstatement purposes, it is proposed to develop 2 no. dedicated on-site soil storage areas immediately adjacent to the substation footprint where excess excavated material will be stored permanently.

In terms of soil erosion, the extent of soil exposed at any given time will be minimised and, in combination with appropriate surface water management measures to direct water away from exposed soil, the likelihood of erosion will be minimised.

Appropriate measures will be put in place to reduce the likelihood of spillages occurring while an emergency plan will be put in place should a pollution event occur.

7.6 Overall Findings

In conclusion, this assessment has determined that the project will not result in any likely significant effects on land and soil. Where effects are likely to occur, such as soil



contamination and erosion, the implementation of appropriate mitigation measures will ensure that the significance of effects is reduced to a negligible and imperceptible level. Where it is not possible to implement mitigation measures, such as in respect of the direct excavation of soil and subsoil, the level of effect is assessed to be not significant.

8.0 Water

8.1 Background

The chapter comprises an assessment of the effect of the project on water. The assessment provides a baseline assessment of the setting of the project in terms of the hydrological environment, and discusses the likely direct, indirect, and cumulative effects arising from the construction, operation and decommissioning of the project.

8.2 Methodology

The methodology involved in the assessment involved a desktop study of available information which was supplemented by site walkovers, drainage mapping, analysis of site investigations, and the undertaking of baseline water monitoring.

8.3 Existing Environment

On a regional scale, electricity substation site and the northern section of the underground electricity line are mapped within the Upper Shannon (Lough Ree) regional surface water catchment within Hydrometric Area 26E. Meanwhile, the southern section of the underground electricity line is mapped in the Upper Shannon (Mid Shannon) regional surface water catchment within Hydrometric Area 26G. Both of these regional surface water catchments are situated in the Shannon Irish River Basin District. There is a distinct absence of surface water features in the vicinity of the electricity substation site; whilst there is 1 no. watercourse crossing along the underground electricity substation site.

The majority of the project site is mapped to be underlain by a Regionally Important Karst Aquifer and the Funshinagh Groundwater Body which is characterised by a karstic flow regime. A detailed baseline investigation was completed at the electricity substation site in order to characterise the hydrogeological setting. The site investigations comprised geophysical surveys, the excavation of trial pits (5 no.), the drilling of rotary core boreholes (6 no.), water quality monitoring and groundwater level monitoring.

Following the site investigations, the large dataset of geological, hydrological and hydrogeological information was compiled and analysed. From the site investigation data, it was identified that the electricity substation site is underlain by topsoil which is, in turn, underlain by cohesive clay deposits. Granular sands underly the clay deposits. The depth to competent bedrock was recorded as ranging from 4.05-12.2m below ground level. The local GSI mapped subsoils consist of till derived from limestones with some areas of karstified limestone bedrock. The bedrock encountered during the site investigations was described predominantly as strong limestones interbedded with dolomite.

No significant karst features were recorded during the site investigations. No groundwater strikes were recorded in the trial pit excavation or during the drilling of



the boreholes. The monitoring of groundwater levels revealed that groundwater flow is to the south and east

8.4 Description of Likely Effects

Excavations and earthworks will be required at the substation and along the underground electricity line, although the latter will be temporary and transient (as it moves progressively along the public road). There is a risk that these works could alter the recharge mechanisms that feed the groundwater system below the electrical substation site and also alter the water quality within the groundwater systems below the site. Such occurrences could impact on local groundwater quality, groundwater wells, and also on downgradient water dependent ecological receptors such as turloughs and river systems.

During each phase of the project (construction and operation), a number of activities will take place which may affect the hydrological regime, surface water features or water quality at the site or its vicinity. These impacts generally arise from sediment arising from construction areas and other pollutants such as hydrocarbons and cement-based compounds, with the former having the greatest likelihood of adverse effects.

Given the characteristics of the site and wider area, there is a low likelihood of effects on surface waters (watercourses, lakes, etc.) as any surface water arising from the site will rapidly percolate to ground.

A Flood Risk Assessment has been completed for the project and concluded that the risk of flooding at the project site is low due to the well-drained nature of the soils and subsoils and the low density of the surface water features. With the implementation of surface water drainage measures, the project will not increase the flood risk elsewhere.

8.5 Mitigation Measures

A key design criterion is to avoid potential karst anomalies or weathered bedrock at the substation location. This has been achieved as iterative site investigation works have been completed (drilling and geophysical surveys) and any areas of increased sensitivity avoided. In addition, the detailed site investigation works that have been completed demonstrate that there is a significant cover of soil and subsoil over bedrock. This means there is a natural protection to the underlying bedrock aquifer in the form of that soils/subsoil cover. Groundwater monitoring has revealed that groundwater levels are below the existing ground level (c. 3m below ground level) at the electricity substation site and all proposed works will be above the water table.

Drainage measures, pollution control and other preventative measures have been incorporated into the project design (electricity substation site and underground electricity line) to minimise significant negative impacts on groundwater quality and downstream designated sites. The implementation of all surface water drainage measures will be the principal means of significantly reducing sediment in drainage water arising from construction activities and for the control of runoff/recharge. The key drainage water control measure is that there will be no direct discharge of site runoff from the site.

Preventative measures also include controls for fuel, concrete management and a waste management plan.



8.6 Overall Findings

In consideration of the relatively small footprint of the project, the localised nature of the works and the proposed mitigation measures, there is no likelihood of the project contributing to or giving rise to significant hydrological, hydrogeological or water quality effects. Overall, no significant impacts on the water environmental are anticipated due to the project.

9.0 Air Quality & Climate

9.1 Background

The chapter comprises an assessment of the effect of the project on air quality and climate. The assessment provides a baseline assessment of the setting of the project in terms of air quality and climate, and discusses the likely effects that the construction, operation and decommissioning of the project will have on them.

9.2 Methodology

The methodology involved in the assessment involves carrying out an evaluation of the likely effects of the development, in terms of the generation of dust and other emissions, in comparison with recognised suitable limits for such emissions. The assessment considers the generation of dust and vehicle emissions during the construction phase while assessing the whether the development could result in impacts during its operational phase. As the project is associated with a wind farm, an evaluation is also made regarding the contribution to the generation of renewable electricity arising from the project.

9.3 Existing Environment

A key factor in assessing temporal and spatial variations in air quality are the prevailing meteorological conditions. In addition, data over the period indicates that 209-days per annum are typically classed as 'wet' which would significantly curtail the likelihood for significant emissions of dust. Dust emissions are dramatically reduced where rainfall has occurred due to the cohesion created between dust particles and water and the removal of suspended dust from the air. It is typical to assume that no dust is generated under 'wet' conditions where rainfall greater than 0.2mm has fallen. Thus, in excess of 53% of the time no significant dust generation will be likely due to meteorological conditions.

Baseline levels of key air quality indicators were found to be substantially below the acceptable levels across a range of criteria. The project site, located in rural County Roscommon, is considered to have similar air quality characteristics as an Environmental Protection Agency (EPA) monitoring site at Kilkitt, Co. Monaghan.

9.4 Description of Likely Effects

Construction phase effects; including excavations and groundworks and construction activities; have been assessed in terms of the effects of dust in the environment and effects on human health. Overall, it is assessed that the construction of the project is not of a scale or will involve activities of a sufficient scale which would result in a significant effect on local air quality nor is it likely to generate significant quantities of dust.

During the operational phase, no dust emissions are likely to be generated by the development due to the general absence of activities at the development site.



Vehicles which will be used during the maintenance of the site will not generate significant emissions and will be substantially outweighed by the export of renewable electricity generated at the Seven Hills Wind Farm to the national electricity grid.

9.5 Mitigation Measures

A range of mitigation measures, generally relating to the construction phase, have been proposed to minimise any effects. These measures are contained in a Dust Minimisation Plan and include:-

- The maintenance of access tracks and public roads;
- Careful management of deliveries which may cause dust to rise;
- Regular inspections of the local road network; and,
- Removal of mud or debris from wheels of vehicles before leaving the project site.

9.6 Overall Findings

The assessment concludes that any adverse construction phase effects on air quality and climate will be negligible and therefore no likely significant adverse effect on the environment. During the operational phase, the development will result in a long term positive effect on both air quality and climate.

Overall, air quality and climate effects are not assessed as likely to be significant.

10.0 Landscape

10.1 Background

This chapter has been prepared to assess the likelihood of significant impacts or effects which the construction and operation of the project may have on the landscape. Landscape Impact Assessment (LIA) relates to changes in the physical landscape brought about by the project, which may alter its character, and how the landscape is experienced. Visual Impact Assessment (VIA) relates to assessing effects on specific views and on the general visual amenity experienced by people. This deals with how the surroundings of individuals or groups of people may be specifically affected by changes to the landscape

10.2 Methodology

This assessment uses methodology as prescribed in the following guidance documents:-

- European Union (2017) Guidance on the preparation of the EIA Report (Directive 2011/92/EU as amended by 2014/52/EU);
- Environmental Protection Agency (EPA) Guidelines on the Information to be contained in Environmental Impact Statements (2022) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (Draft 2015); and,
- Landscape Institute and the Institute of Environmental Management and Assessment Guidelines for Landscape and Visual Impact Assessment Third Addition (2013) ('GLVIA3').

The assessment involved desktop studies to understand the existing baseline environment; fieldwork recording the elements and characteristics of the landscape and selecting and capturing images to allow the preparation of photomontages;



and the professional evaluation of the baseline environment and the effects that may occur as a result of the project with the aid of the accompanying photomontages.

The study area selected for this assessment is a 5 km radius around the project site, as significant landscape or visual effects from this development are unlikely beyond this distance.

10.3 Existing Environment

A review of the Roscommon County Development Plan 2022-2028 identified all relevant landscape and visual designations which assisted in guiding and informing the assessment. A Landscape Character Assessment was produced for the county which divides the county into 7 no. landscape character types. The site is located in the 'River Corridor' Landscape Character Type, the 'Dry Farmland' Landscape Character Type, and the 'Bog and Farmland Complex' Landscape Character Type.

The generic Landscape Character Types are then further divided into 36 no. geographically distinct Landscape Character Areas. Within the 'Dry Farmland' and 'Bog and Farmland Complex' Landscape Character Types, the underground electricity line passes through 'Landscape Character Area 34 - Lough Funshinagh, Stone Wall Grasslands and Esker Ridges' and 'Landscape Character Area 35 -Brideswell Esker Belt' Landscape Character Areas which are categorised as being of 'Moderate Value'.

The 'River Corridor' Landscape Character Type, within the northeastern half of the study area, contains 2 no. Landscape Character Areas, namely 'Landscape Character Area 8 – Lower Lough Ree and Athlone Environs' and 'Landscape Character Area 7 - Mid Lough Ree Pastureland'. No part of the project is located in the former, but the electricity substation and a short section of the underground electricity line are in the latter. These Landscape Character Areas have been designated as landscapes of 'Very High Value' (second highest of 4 no. classifications).

The Landscape Character Assessment for the county also indicates designated 'Scenic Routes and Scenic Views'. There is 1 no. Scenic Route (R8) and 1 no. Scenic View (V22) is located within the study area. Scenic View V22 is orientated to the northwest, which is in the opposite direction to the project, and occurs outside of the Zone of Theoretical Visibility pattern; therefore, no visual effects can occur. Scenic Route R8 is located in the townland of Lisfelim and orientated to the southeast. Half of this route is within the Zone of Theoretical Visibility pattern and thus has been selected for assessment as a Viewshed Reference Point (VP1).

10.4 Description of Likely Effects

Physical landscape impacts will occur at the project site. Trenches will be excavated to allow ducting installation and the electricity line below ground level. A limited excavation will be required to create level foundations for the substation. This will result from disturbance to the landform and land cover of the proposed substation footprint and its associated access track and site entrance. The impact of the trench on the landscape will be modest in scale in terms of the physical impact and the impact on landscape character. The main effect of the electricity substation will be an increased sense of industrialisation and intensity of built development within this predominantly rural setting. However, electricity substations are relatively familiar features throughout the Irish countryside and there will not be a sense of ambiguity



associated with its development in this setting.

The significance of landscape impacts is assessed based on landscape sensitivity weighed against the magnitude of physical landscape effects within the project site and effects on landscape character in the wider landscape setting.

On the balance of these factors, it is assessed that the project will not significantly impact the landscape during the construction, operational, or decommissioning phases or result in any significant cumulative impacts.

Construction phase visual effects are assessed to be no greater than Medium even at the closest receptor locations where clear views towards the project site are afforded.

The magnitude of the visual effect during the operational phase was assessed with the aid of the verified photomontages (pre- and post-mitigation). The greatest visual effect magnitude is assessed to be Medium-low at 1 no. Viewshed Reference Point (VP3), while the remaining 4 no. are assessed to be no greater than Low.

A set of photomontages was also prepared to represent the permitted Seven Hills Wind Farm development for potential cumulative effects.

The project is assessed as contributing to the intensity of built development, particularly electrical infrastructure, in this area, but in a very localised way and only to a degree consistent with a medium-low magnitude of cumulative impact.

The magnitude of visual effects is assessed in conjunction with the sensitivity of each Viewshed Reference Point. Considering these factors, the assessment of visual impacts determines that the project will have no significant visual impacts.

10.5 Mitigation Measures

Aside from standard construction stage measures to minimise land and vegetation disturbance (such as delineating the works area) and dust emissions (through damping down of access tracks if necessary), no specific landscape and visual mitigation measures are to be implemented. The appropriate management and reinstatement of excavations promptly will ensure that any adverse effects caused, for example, at the site entrance or along the route of the underground electricity line, are minimised insofar as possible.

Similarly, the progressive reinstatement and landscaping of the site will remediate any short-term adverse effects on the local landscape. As part of the reinstatement and landscaping process, the planting of hedgerows will also be completed at the electricity substation site entrance.

In addition:-

- The land between the western and northwestern perimeter of the electricity substation and the nearest existing field boundaries (including spoil deposition area) will be managed as a meadow for biodiversity;
- New hedgerows will be planted along the southern and eastern perimeter of the electricity substation and the northern side of the access track. The species to be planted will be agreed with the Ecological Clerk of Works and selected to reflect the species present in existing hedgerows in the local landscape. The species mix is likely to comprise Blackthorn, Hawthorn and Hazel;
- The hedgerow along the western boundary of the site will be retained and supplemented by additional planting where deemed appropriate; and,



• It is intended to manage and maintain proposed hedgerows at c. 3-4m in height.

Any exposed cut faces arising from excavations to construct the level platform for the electricity substation will be allowed to re-vegetate naturally. As a result, and by default, the most suitable species for the conditions will colonise and help the rawcut face blend into its surroundings.

10.6 Overall Findings

Whilst mitigation screen planting will help assimilate the project within the immediate landscape setting, it is not considered that the wider-level effects on landscape character and landscape fabric will be noticeably altered as a result of this planting.

A set of photomontages was prepared to illustrate the effect of the mature mitigation planting from the selected Viewshed Reference Points. These demonstrate that once the planting becomes established, it will help the project blend in visually with the receiving landscape; however, it will not entirely screen the project.

For these reasons, it is assessed that the mitigation measures would not result in a marked reduction to the assessed pre-mitigation landscape and visual impacts; however, it is assessed that no significant effects will occur.

11.0 Cultural Heritage

11.1 Background

This chapter has been prepared to assess and define any likely significant impacts or effects which the construction, operation and decommissioning of the project may have on the archaeological, architectural and cultural heritage resource. The chapter includes an identification of likely significant impacts or effects which may arise and outlines mitigation measures, based on current information, which may be used to avoid, reduce or offset any likely adverse effects.

11.2 Methodology

A 1km study area has been applied around the electricity substation to assess the presence of statutorily protected archaeological remains (RMP sites). In addition, a 2km study area has been applied around the electricity substation to assess the presence of any World Heritage Sites, sites included in the Tentative List as consideration for nomination to the World Heritage List, National Monuments, sites with Preservation Orders or Temporary Preservation Orders, Protected Structures, Conservation Areas, Proposed Conservation Areas, or structures recorded on the National Inventory of Architectural Heritage (NIAH).

As the electricity line will be underground and predominately located within the existing road network, a 100m study area either side of the route has been applied to look for the presence of statutorily protected archaeological, architectural and cultural heritage features.

Research has been undertaken in 2 no. phases. The first phase comprised a desk review, namely a paper and digital survey of archaeological, historical and cartographic sources. The second phase involved field inspections of the project site.



11.3 Existing Environment

There are no Recorded Monuments or any additional statutorily protected archaeological features within the footprint of the project (electricity substation and electricity line). There are 2 no. Recorded Monuments within 200m of the electricity substation. There are an additional 32 no. Recorded Monuments within 1km of the electricity substation. It is assessed that there will be a likely long-term, reversible and not significant operational phase visual effect on the archaeological resource. It is assessed that there will be a likely long-term, reversible and imperceptible operational phase noise effect on the archaeological resource.

There are no Protected Structures or structures recorded on the National Inventory of Architectural Heritage within the footprint of the project (electricity substation and underground electricity line). There are 4 no. Protected Structures within 2km of the electricity substation (3 no. of which are recorded on the National Inventory of Architectural Heritage). There are 4 no. structures recorded on the National Inventory of Inventory of Architectural Heritage within 2km of the substation (3 no. of which are recorded as Protected Structures).

11.4 Description of Likely Effects

It is assessed that there will be a likely permanent, direct and imperceptible construction phase effect on any previously unrecorded archaeological remains that may exist within the project site and which may be discovered during the construction phase. It is assessed that there will be a likely temporary, reversible and imperceptible construction phase visual and noise effect on the archaeological resource. It is assessed that there will be a likely permanent, direct and imperceptible construction phase effect on any townland or parish boundaries that may be affected by the project. There will be no direct or indirect construction phase effect on any watercourses. Two no. drainage ditches (culverts) will be crossed via trenching, and 1 no. watercourse will be crossed via horizontal directional drilling. As such, no in-stream works are required. It is assessed that there will be a likely temporary, reversible and imperceptible construction phase visual and noise effect on the architectural resource.

It is assessed that there will be a likely long-term, reversible and not significant operational phase visual effect on the archaeological resource. It is assessed that there will be a likely long-term, reversible and imperceptible operational phase noise effect on the archaeological resource.

It is assessed that there will be a likely long-term, reversible and not significant operational phase visual effect on the architectural resource. It is assessed that there will be a likely long-term, reversible and imperceptible operational phase noise effect on the architectural resource.

11.5 Mitigation Measures

Archaeological monitoring of all excavations associated with construction of the electricity substation shall be carried out. Archaeological monitoring of all excavations associated with construction of the underground electricity line shall be carried out. Archaeological monitoring of all excavations at townland and parish boundaries shall be carried out. Written and photographic records will be created of any townland and parish boundaries that may be impacted on. The written and photographic records will be created in advance of excavations commencing on site.



Given its proximity to a Recorded Monument (standing stone, which no longer survives above-ground), it is recommended that the micrositing of infrastructure should not be considered at the site of the electricity substation should it result in infrastructure moving closer to the site of the Recorded Monument.

11.6 Overall Findings

It is assessed that there will be a likely residual long-term, reversible and not significant operational phase visual effect on the archaeological resource and a likely residual long-term, reversible and imperceptible operational phase noise effect on the archaeological resource. In addition, it is assessed that there will be a likely residual long-term, reversible and not significant operational phase visual effect on the architectural resource and a likely residual long-term, reversible and imperceptible operational phase noise effect on the architectural resource.

Overall, it is assessed that there will be no likely significant residual effects during the construction or operational phases of the project.

12.0 Noise & Vibration

12.1 Background

This chapter has been prepared to assess and define any likely significant noise and vibration impacts or effects which the construction and operation of the project may have on nearby sensitive receptors. The chapter includes an identification of likely significant impacts or effects which may arise and outlines mitigation measures, based on current information, which may be used to avoid, reduce or offset any likely adverse effects.

12.2 Methodology

The methodology followed in preparing this chapter included a desk based review of appropriate guidance and criteria, undertaking of a baseline noise monitoring survey, prediction of construction and operational phase noise levels and discussion on the implementation of mitigation measures as required.

12.3 Existing Environment

Baseline noise monitoring was undertaken at the electricity substation site by installing an unattended sound level meter within the project site. The noise survey found that the existing environment is typical of rural Ireland which noise being generated by wind noise in foliage, birdsong, local road traffic noise and other agricultural activities. No unusual noise sources were recorded.

An attended noise survey was undertaken at 4 no. locations along the route of the underground electricity line. Similar results to those at the electricity substation site were recorded.

No existing sources of vibration are presented within the project site or its vicinity.

12.4 Description of Likely Effects

When assessing a project of this nature, it is necessary to assess the short-term construction effects and long-term operational effects.

During the construction phase, noise will be generated by plant and machinery and by HGVs associated with the delivery of materials to the construction site. The

electricity substation site, at which the vast majority of construction activity will take place, is located a sufficient distance from dwellings that significant noise effects are not assessed as likely to be significant. Construction work associated with the underground electricity line will be undertaken in close proximity to a number of dwellings; however, due to the nature of construction activities, works will only be undertaken in the vicinity of a particular dwelling for a short period of time. Therefore, construction phase effects are not predicted to be significant.

During the operational phase, the electricity substation will not generate noise due to the absence of an electrical transformer. The underground electricity line will not generate any noise. Therefore, significant effects will not occur.

It is assessed that the project will not result in significant cumulative effects with other projects including the permitted Seven Hills Wind Farm.

12.5 Mitigation Measures

As the project will not result in the generation of significant noise or vibration levels, specific mitigation measures are not required. However, the project will be constructed in accordance with all best practice guidelines regarding the management of construction sites which will include measures related to the minimisation of noise and vibration.

12.6 Overall Findings

It is assessed that the project, individually or in combination with other developments will not result in significant levels of noise or vibration during either the construction or operational phases.

13.0 Material Assets

13.1 Transport & Access

13.1.1 Background

This chapter has been prepared to assess and define any likely significant impacts or effects which the construction and operation of the project may have on transport and access. The chapter includes an identification of likely significant impacts or effects which may arise and outlines mitigation measures, based on current information, which may be used to avoid, reduce or offset any likely adverse effects.

13.1.2 Methodology

The methodology followed in the preparation of this chapter included a desktop review of relevant transportation policy and appropriate guidance; a site walkover of the project site and a driven survey of the electricity line route; and the subsequent evaluation of likely effects and identification of suitable mitigation measures.

13.1.3 Existing Environment

The road network in the vicinity of the project comprises a mix of national secondary, regional and local roads. In addition, the M6 motorway is located c. 4km to the south of the project and is likely to be utilised in the delivery of electrical equipment and other construction materials, subject to the selection of suppliers.



The N61 national secondary road, along which it is anticipated the majority of construction materials will be transported, is of a good condition and would appear to be subject to regular maintenance. It is also noted that the N61 is proposed to be subject to improvement works as described at Table 7.2 of the Roscommon CDP.

Regional roads in the vicinity of the project site; including the R362 and R363 which may also be utilised to transport construction materials; are assessed to be generally of good quality, however, localised evidence of surface deterioration was noted during fieldwork.

The R362 regional road is a relatively narrow two-lane carriageway generally bounded by hedgerows or stone walls. In rural areas, the road has a speed limit of 80kph and is not accompanied by pedestrian footpaths or street lighting. However, as the road passes through the settlement of Curraghboy, a reduced speed limit of 50kph is applicable and street lighting and footpaths are present.

The R363 regional road is also a two-lane carriageway predominately bounded by hedgerows. In rural areas, the road has an 80kph speed limit and there is no evidence of street lighting or pedestrian footpaths.

Access to the site of the electricity substation will, from the N61, be via the L7556 and L7551. The L7556 is a single-lane carriageway which is generally of good condition; however, there is evidence of surface deterioration at a number of locations. The L7551 is a narrow single-lane carriageway; bounded by hedgerows and stone walls; which appears to be lightly trafficked and is unlikely to be utilised by through-traffic. While the surface of the road displays a substantial degree of degradation, it is assessed to be of a sufficient condition for the likely volumes of traffic.

13.1.4 Description of Likely Effects

The construction phase of the project is estimated to last approximately 18-months, with the majority of traffic trips being associated with the construction of the substation compound, the removal of excavated material from the electricity line trench and the delivery of backfilling/reinstatement material for the trench. During this period, there will also be trips associated with the arrival and departure of construction staff and with the delivery of reinforcing steel, ready-mix concrete and electrical equipment. Staff trips will mainly be made using cars and vans, while deliveries of steel, concrete, electrical equipment and other general construction materials will be made by HGV.

The construction phase of the project will comprise a 6-day week with normal working hours from 07.00 to 19.00 Monday to Friday and 07.00 to 13.00 on Saturdays.

An existing agricultural access point will be utilised to access the electricity substation. Due to the characteristics of the access point and the vehicles which will be accessing the site, no significant works are required, such as removal of existing roadside vegetation or stone walls. An existing agricultural gate and associated wire fencing will be removed to accommodate the upgrade of the existing access point. Appropriate visibility splays will be provided at the entrance. All works related to the upgrade of the entrance will be undertaken within private lands which will ensure that there are no significant direct or indirect transport and access effects on the road network through disruption or delay to traffic flows.

The installation of the underground electricity line will result in both direct and indirect effects on transport and access. Trenches will be excavated within the paved surface of the respective carriageways to accommodate the installation of



ducting and the electricity line. Additionally, excavations will be undertaken to facilitate the installation of joint bays. Where possible, joint bays will be installed within roadside verges of at field entrances; however, excavations within the paved surface is also likely to occur. Following the installation of the electricity line ducting, the trench will be backfilled with appropriate material and temporarily reinstated. Following the installation of the underground electricity line, all public roads within which it is proposed to install the underground electricity line will be subject to a full-width carriageway reinstatement (re-surfacing) of the relevant road section thus ensuring that there are no long-term effects on the public road network.

It is likely that the movement of construction traffic along the route of the underground electricity line (e.g. tracked excavators) will result in a deterioration of the paved surface of the respective public roads. However, the full-width carriageway reinstatement referred to above will ensure that any deterioration is appropriately remediated such that there are no long-term effects on the public road network. It is assessed, therefore, that direct effects on transport and access (i.e. the road network) will be slight, negative and short-term (temporary).

During the installation of the underground electricity line, and due to the narrow width of the local roads involved, full road closures will be implemented as construction activities progress along the route. However, the section of road to be closed at any particular time will be short (c. 100m) and appropriate measures (such as diversionary routes and the maintenance of local access) will be implemented.

It is estimated that approximately 3,714 no. loads of construction (and associated) materials will be delivered to site. Assuming an 18-month construction phase, this equates to approximately 207 no. loads per month or an average of 9 no. loads per day excluding Sundays and public holidays. The majority of civil construction material, such as aggregates, concrete and building materials will be delivered to site using standard rigid trucks, HGVs and ready-mix trucks.

Following the completion of construction works, it is estimated that approximately 35 no. loads will be needed to remove all temporary equipment, plant and machinery and materials used on site.

Operational phase monitoring activities will be carried out, remotely, on an ongoing basis. However, regular visits to the site will be undertaken for routine inspections and maintenance. Under normal circumstances, the operation of the project will require 1-2 no. visits to the site per week by maintenance personnel.

13.1.5 Mitigation Measures

A range of mitigation measures have been proposed to ensure that traffic is appropriately managed, and that the effects on the road network and on access for local residents are minimised. These measures include the implementation of a comprehensive Traffic Management Plan including traffic diversions as necessary, strict working hours, careful scheduling of traffic movements and wheel washing to ensure debris is not transferred to the local road network. The local road network will also be monitored to ensure that no structural damage is caused and, where necessary, remedial works will be undertaken.

13.1.6 Overall Findings

It is assessed that there will be no likely significant residual effects during the construction phase or operational phase of the project. The implementation of the



above measures will ensure that there are no significant or long-term effects on the road network.

13.2 Aviation

13.2.1 Background

The project is not, due to the absence of particularly tall structures, a type of development which is likely to give rise to effects on or interactions with aviation.

13.2.2 Methodology

Consultation was undertaken with the Irish Aviation Authority (IAA) and Department of Defence to establish if any effects on aviation were likely. The Irish Aviation Authority responded, stating that it had no observations to make on the project while no response was received from the Department of Defence. In addition, a publication by the Air Corps regarding wind turbines and tall structures was also examined.

13.2.3 Existing Environment

There are no major airports in the vicinity of the project and the site is, therefore, assessed as being unconstrained. The project is located c. 60km east of Galway Airport, c. 70km southeast of Ireland West (Knock) Airport, c. 95km northeast of Shannon Airport, and c. 120km west of Dublin Airport.

According to the IAA, there are no aerodromes or airstrips in the immediate vicinity of the project or indeed within County Roscommon. The nearest aerodrome in the Republic of Ireland is at Abbeyshrule in County Longford at an approximate distance of 36km.

The project site is not located within any 'Danger', 'Restricted' or 'Military Operating' area as identified at Annex A, B or C of the Air Corp Position Paper. Similarly, the subject site is not located within 3-nautical miles of any critical low-level route identified at para. 2(2)(c) and illustrated at Annex D of the Paper.

13.2.4 Description of Likely Effects

The assessment concludes that the project is unlikely to result in any significant effect on aviation.

13.2.5 Mitigation Measures

No mitigation measures, specific to the project are required.

13.2.6 Overall Findings

This assessment concludes that the project is unlikely to result in any significant effect on aviation. The project does not comprise particularly tall structures which could pose a risk to military or civilian aviation operations.

13.3 Telecommunications

13.3.1 Background

This section considers the likely effects of the project upon a range of communications infrastructure, including telecommunication networks, broadcast



radio and television and fixed infrastructure such as telecommunication masts. In theory, given the nature of the project and the absence of tall structures, interference or adverse effects are unlikely.

13.3.2 Methodology

The methodology followed to assess the likelihood of significant effects on telecommunication networks consisted of desk based research and consultation with various telecommunication companies and relevant authorities.

13.3.3 Existing Environment

The consultations and desk research demonstrated that the project site is not a significant location for telecommunication links. The locations of existing telecommunication masts in the local area can be found at the Commission for Communications Regulations website.

13.3.4 Description of Likely Effects

While there are telecommunication masts located within the local area, including mobile phone masts, the detailed consultation process has not identified the likelihood of any interference with existing telecommunication links.

13.3.5 Mitigation Measures

The project is not likely to result in any effects on telecommunications and, therefore, no mitigation measures are necessary.

13.3.6 Overall Findings

It can be concluded that, on the basis of a desktop assessment and extensive consultation with stakeholders, the project will not result in likely significant effects on the telecommunications network.

13.4 Resources & Utility Infrastructure

13.4.1 Background

This section provides details of the likelihood of significant effects or interactions with existing renewable and non-renewable resources and existing utility infrastructure; including existing or permitted wind farms, quarries, mining operations and utility infrastructure (electricity lines and phone lines).

13.4.2 Methodology

The methodology followed in this assessment involved a desk based study to identify resources and utility infrastructure which could be affected by the project followed by an evaluation, based on experience, as to whether these resources were likely to be affected.

13.4.3 Existing Environment

Within County Roscommon, there are a number of existing operational and permitted wind farm developments. Existing quarries are scattered throughout County Roscommon and some will be used to source construction materials. The environs of the project site, and the wider midlands region more generally, is notable for its lowland peatland bogs and has a significant industrial heritage of cutaway



peat extraction for power generation. As a consequence, there is a significant legacy of electricity grid infrastructure in the wider environs of the project site. As peat extraction is now gradually being phased out for climate change reasons, nonrenewable energy production from peat extraction is gradually being replaced with renewable energy production.

There is also the presence of utility infrastructure, with overhead electricity lines connecting to the majority of dwellings, medium and high voltage electricity lines traversing the landscape and telecommunication lines located adjacent to the majority of local roads.

13.4.4 Description of Likely Effects

The construction phase of the project is not likely to have any significant effects on existing resources or utility infrastructure. The construction phase will not restrict the export of energy generated from other sources nor will it impact upon existing utility services. While there is a possibility interaction with utility services (e.g. accidental collision with overhead wires during the construction phase), this can be mitigated through good construction practices.

The construction phase will result in the extraction of non-renewable resources in the form of stone and gravel for the construction of access tracks and concrete for building foundations and electrical equipment plinths. However, stone and gravel will only be sourced from quarries with have full planning permission.

The operational phase of the project will not result in any effect on existing utility infrastructure or renewable or non-renewable resources. The connection of the project to the national grid will strengthen the electricity network infrastructure in the wider region.

13.4.5 Mitigation Measures

No specific mitigation measures are proposed or required during the construction or operational phases.

13.4.6 Overall Findings

This assessment concludes that the project is unlikely to result in negative effects on renewable and non-renewable resources or on utilities infrastructure. The operation of the project will bring about a benefit in terms exporting electricity generated from a renewable source to the national grid and a strengthening of national electricity grid infrastructure in County Roscommon.

14.0 Interactions of the Foregoing

All environmental factors are interrelated to some degree. The assessment of these interactions is an important requirement of the environmental impact assessment process. Having assessed the interaction of likely effects during the construction and operational phases, the likely interactions are not assessed as likely to result in any effects that could magnify effects through the interaction or accumulation of effects.

15.0 Summary of Effects

This Non-Technical Summary has outlined, in summary format, the findings of the EIAR for the project. Full details are set out in the EIAR and its accompanying technical



appendices.

The EIAR has assessed that any likely adverse effects of the project, and their interactions, can be managed and mitigated and that there are lasting social and environmental benefits as a result of the project. Whilst the project will have some minor residual adverse effects on the local environment, these will be addressed through mitigation measures, good management and proposed construction techniques and are not assessed as likely to be significant.

The project, in combination with the permitted Seven Hills Wind Farm, will make a positive contribution to sustainable energy generation in Ireland and will also help diversify and sustain the rural economy through construction, as well as operation and maintenance, activities. Overall, the combined effects which have been assessed within this EIAR demonstrate that the project will not result in a likely significant adverse effect on the environment.

