Moyvannan Electricity Substation

Environmental Impact Assessment Report

Annex 1.4: Scoping Request Letter

Energia Renewables ROI Limited

Galetech Energy Services
Clondargan, Stradone, Co. Cavan Ireland
Telephone +353 (0)49 555 5050
www.galetechenergyservices.com

Galetech Energy Services
Cavan: Clondargan, Stradone, Co. Cavan, Ireland, H12 NV06
Cork: Unit 2 Airport East Business Park, Farmers Cross,
Kinsale Road, Cork, Ireland

t: +353 49 555 5050
e: info@galetechenergy.com
w: www.galetechenergy.com

An Taisce,
Tailors' Hall
Back Lane
Dublin 8
D08 X2A3

27 February 2024
Our Ref: SEV001SS

Re: Pre-Application Scoping Request for a proposed 110kV Electricity Substation & Underground Electricity Cables in County Roscommon

To whom it may concern,

Energia Renewables ROI Limited is proposing to develop grid connection infrastructure ('the proposed development') associated with the permitted Seven Hills Wind Farm (An Bord Pleanála Reference ABP-313750-22). The proposed development will be located within Co. Roscommon approximately 8 kilometres (km) northwest of Athlone and will include a 110 kilovolt (kV) electricity substation and approximately 7km of underground electricity cables.

The proposed electricity substation, and associated infrastructure, will be located in the townland of Moyvanann. The electricity substation shall comprise the following elements:-

- A compound with a hardcore surface enclosed by security fencing and gates containing electrical plant and equipment;
- An electrical control building containing electrical plant and equipment;
- 2 no. interface masts and overhead electrical cables to facilitate connection to the existing Athlone-Lanesborough 110kV overhead transmission line; and,
- Associated site development works including the upgrading of an existing agricultural site entrance, construction of an access track and installation of site drainage infrastructure.

Currently, 2 no. electricity cable route options are being assessed to determine the presence of environmental constraints and to determine the technical suitability of the route to accommodate the electricity cables. Route Option A would be located within the townlands of Moyvannan, Feamore, Lisbaun, Lissygreaghan, Gortacoosan, Ballycreggan, Corrantotan, Knocknanool, and Ballymullavill; and within the L7551, L2019, L2018, and the R362 to its junction with the R363. At this point, the electricity cables will connect to electricity cables permitted as part of the Seven Hills Wind Farm.

Route Option B would be located within the townlands of Moyvannan, Feamore, Lisbaun, Carrownolan, Carrowncloghan, Carrowkeeny, Ardmullan, Curraghboy, Gortnasythe, Derryglad, Eskerbaun, and Brideswell; and within the L7551, L2019, L2018, L7731, R362, L2023, and L7636. At this point, the electricity cables will connect to electricity cables permitted as part of the Seven Hills Wind Farm.

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e: info@galetechenergy.com
w: www.galetechenergy.com

Galetech Energy Services (GES) is currently carrying out a detailed Environmental Impact Assessment (EIA) scoping exercise on behalf of Energia Renewables ROI Limited, in order to assess and confirm the suitability of the site for this development. A Preliminary Scoping Report is enclosed in **Annex 1** and includes a description of the development currently under consideration and a set of site location and layout drawings.

As part of this scoping assessment, and in accordance with the Environmental Impact Assessment (EIA) Directive, GES endeavours to engage all stakeholders at an early stage of project design in order to allow for a more focused consideration of any likely significant environmental effects. Should you have any comments on the proposed development in respect of your specific area of competence, we would be grateful if you could send them to us by 27 March 2024. Feedback can be sent by post to Simon Carleton at the above address (Cavan Office) or by email to simon.carleton@galetechenergy.com.

We wish to highlight that the current project design may be subject to change as a result of ongoing consultation and assessment throughout the EIA process.

Should you have any queries relating to the proposed development, please do not hesitate to contact this office.

Galetech Energy Services

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Annex 1 –

Preliminary Scoping Report

Moyvannan Electricity Substation

Preliminary Environmental Impact Assessment Scoping Report

Energia Renewables ROI Limited

Galetech Energy Services
Clondargan, Stradone, Co. Cavan Ireland
Telephone +353 49 555 5050
www.galetechenergy.com

DOCUMENT CONTROL

	Function	Name
Content	Senior Planner	Simon Carleton
Approval	Planning Team Manager	Gavin Daly

RECORD OF CHANGES

Revision Number	Issue Date	Summary of Change	Approved
00	26/02/2024	Content	Simon Carleton

DISTRIBUTION LIST

#	Function Title	Company	Name (optional)
1	For Environmental Scoping	Various	Various
2			
3			
Notes:			

Contents

1.0 Introduction

Energia Renewables ROI Limited ('the Applicant') intends to apply for planning permission for the construction and operation of an electricity substation and associated underground electricity cables ('the proposed development') to facilitate the connection of the permitted Seven Hills Wind Farm to the national electricity network. The proposed development will be located approximately 8 kilometres (km) northwest of Athlone.

The location of the proposed development, in a regional context, is illustrated at **Annex 1**.

1.1 The Applicant

Energia Renewables ROI Limited is a joint venture between Energia Renewables Limited and Galetech Energy Developments Limited.

Energia Renewables Limited is a subsidiary company of the Energia Group with offices in Dublin, Belfast, Antrim and Omagh; and has extensive experience in the development, design, construction and operation of wind energy developments throughout Ireland. As a leading and long term energy provider and infrastructure investor, the Energia Group currently supplies approximately 17% of the island of Ireland's total electricity requirements and is responsible for approximately 21% of wind power capacity installed on the island. Energia Renewables Limited's growing renewable energy portfolio consists of 16 no. onshore wind farms, which generate over 300-megawatts (MW) of green electricity while an additional 900MW is supplied through Power Purchase Agreements (PPAs).

Currently, Energia has a development pipeline comprising onshore wind projects, offshore wind projects, solar energy developments, battery energy storage developments and hydrogen production.

Galetech Energy Developments Limited is an Irish owned company, based in County Cavan, with a focus on the development of renewable energy projects in Ireland and worldwide. Galetech Energy Developments Limited has been involved in the delivery of in excess of 500MW of renewable energy developments on the island of Ireland and has a global development pipeline of in excess of 3-gigawatts (GW) comprising onshore wind developments, offshore wind developments, solar developments and battery energy storage developments.

1.1.1 The Agent

Galetech Energy Services (GES) has been engaged by the Applicant to coordinate the preparation of an Environmental Impact Assessment Report (EIAR) including the environmental scoping process and constraints analysis. GES is an Irish multi-disciplinary renewable energy consultancy that specialises in the delivery of planning, environmental and project management services to renewable energy developments from project feasibility through the development cycle and onto the operational phase. GES combines the expertise of leading experts in renewable energy design, planning and environmental assessment and has extensive experience in managing and coordinating EIAR projects for wind energy and associated electricity grid and substation developments.

1.2 Purpose of this Report

This Preliminary Scoping Report has been prepared to provide a high level overview of the proposed development to allow consultees inform themselves of the scope of

the proposed development and provide comment on information which should be included in the EIAR.

This report also sets out to provide an overview of the EIAR scoping process undertaken by the Applicant to date.

A comprehensive Scoping Report, detailing the entire scoping process including environmental scoping and constraints analysis undertaken by specialist environmental experts, consultation with local communities and the general public, and consultation with statutory consultees will accompany a planning application for the proposed development as an annex to the EIAR.

2.0 Environmental Impact Assessment (EIA)

EIA is a process required by the European Union (EU) Environmental Impact Assessment Directive 2011/92/EU, as amended by 2014/52/EU ('the 2014 EIA Directive'), and transposed into Irish law by way of Part X of the Planning & Development Act 2000 (as amended).

EIA is carried out by the relevant competent authority to ensure that projects, where the likelihood of significant effects on the environment cannot be excluded, are subject to a comprehensive and independent examination, analysis and evaluation of their likely significant effects on the environment. EIA provides for an assessment of all effects; including direct, indirect, secondary, cumulative, transboundary, short-term, medium-term, long-term, permanent, temporary, positive and negative; of as they may relate to the construction, operational and decommissioning phases of a project.

2.1 EIA Screening

In accordance with the provisions of the *Planning & Development Act 2000 (as amended)*, EIA is mandatory when certain classes of projects exceed specific sizes and thresholds. Planning applications for such projects must be accompanied by an EIAR. Schedule 5 of the *Planning and Development Regulations 2001 (as amended)* provides the classes of development proposals which shall be subject to EIA. The proposed development is not, of itself, a category or type of development listed as requiring EIA. Therefore, there is no statutory requirement for the proposed development to be accompanied by an EIAR.

Notwithstanding the above, a judgement of the High Court in respect of *O'Grianna & Ors. v. An Bord Pleanála ([2014] IEHC 632)* determined that a wind farm and its connection to the national grid are considered a single indivisible project for the purpose of the EIA Directive. Accordingly, as the proposed development comprises grid connection infrastructure for the permitted Seven Hills Wind Farm, an EIAR is required to be submitted with this planning application.

2.2 Environmental Impact Assessment

An EIAR is a written statement of the likely significant effects, if any, which the proposed development, if carried out, will have on the environment. The EIAR consists of a systematic analysis of the proposed development, including its construction, operational and decommissioning phases, in relation to the existing environment. It is an iterative process carried out throughout the full lifecycle of the project design and consenting process so as to allow for preventative and ameliorative action, as necessary, at a point in time when changes can still be made to the project that anticipate, avoid and mitigate any likely significant effects foreseen.

The EIAR is the principal document that informs the EIA process and provides integral information which consenting authorities can use, amongst other considerations, in independently undertaking EIA and informing a decision making process.

The EIAR can also be used by third parties, including members of the public concerned, as part of the public participation process, to evaluate the proposed development and its likely significant environmental effects, and to inform any submissions made to the planning application process.

The EIAR will be prepared in accordance with the provisions contained within Schedule 6 of the *Planning and Development Regulations 2001 (as amended)* and the 2014 EIA Directive; each of which set out the information to be contained in an EIAR.

2.2.1 Purpose of the EIAR

The EIAR provides for a system of sharing information about the environment, within which a proposed development sits, and enables effects to be foreseen and prevented during the design and consent stages. The purpose of the EIAR is to:-

- Anticipate, avoid and reduce significant effects;
- Assess and mitigate effects;
- Maintain objectivity;
- Ensure clarity and quality;
- Provide relevant information to decision makers; and,
- Facilitate better consultation.

It is a statutory requirement that the EIAR pays particular regard to the:-

- Key alternatives;
- Proposed project;
- Receiving environment;
- Likely significant effects;
- Mitigation and monitoring measures; and,
- Residual effects.

A non-technical summary must also be provided.

2.2.2 EIAR Methodology

In May 2022, the Environmental Protection Agency (EPA) published the *Guidelines on the Information to be contained within an Environmental Impact Assessment Report* and these guidelines reflect the 2014 EIA Directive and the provisions contained therein. The guidelines are a statutory document and provide guidance on the role of the EIAR in the EIA process, the key activities involved in the EIAR process, and guidance on the presentation of the information contained in the EIAR.

GES, and all experts involved in the preparation and production of the EIAR, will have regard to these guidelines; while best practice guidance related to each individual environmental discipline or topic addressed by the EIAR will also be adhered to.

2.3 Content of the EIAR

The EPA guidelines include a 7 no. stage approach (sequence) in the production of the EIAR. This includes:-

- Screening;
- Scoping;

- Consideration of Alternatives;
- Describing the Proposed Project;
- Describing the Baseline;
- Assessment of Effects; and,
- Mitigation/Monitoring.

The guidelines outline that adherence to this sequence ensures an objective and systematic approach is achieved. Using this sequence, each environmental discipline/topic is addressed in a discrete chapter wherein the existing environment is described, the likely significant effects (positive, negative, & cumulative) are assessed, appropriate mitigation and monitoring measures are proposed, and residual effects are assessed. This format allows for ease of investigation into each discipline or topic and for specialist studies/input to be integrated seamlessly. The proposed structure of the EIAR is set out below:-

- Introduction;
- Assessment of Project Alternatives;
- Description of the Proposed Development;
- Population and Human Health;
- Biodiversity;
- Land & Soil;
- Water;
- Air Quality & Climate;
- Landscape;
- Cultural Heritage;
- Noise & Vibration;
- Material Assets; and,
- Interaction of the Foregoing.

Each chapter of the EIAR will be structured using the following format:-

- Introduction;
- Description of the Existing Environment;
- Description of Likely Significant Effects;
- Mitigation & Monitoring Measures;
- Residual Effects; and,
- Conclusion.

3.0 Proposed Development

The proposed development will be located within Co. Roscommon approximately 8 kilometres (km) northwest of Athlone and will include a 110 kilovolt (kV) electricity substation and approximately 7km of underground electricity cables.

3.1 Electricity Substation

The proposed electricity substation, and associated infrastructure, will be located in the townland of Moyvanann. The electricity substation shall comprise the following elements:-

- A compound with a hardcore surface enclosed by security fencing and gates containing electrical plant and equipment;
- An electrical control building containing electrical plant and equipment;
- 2 no. interface masts and overhead electrical cables to facilitate connection to the existing Athlone-Lanesborough 110kV overhead transmission line; and,
- Associated site development works including the upgrading of an existing

agricultural site entrance, construction of an access track and installation of site drainage infrastructure.

The electricity substation is centred at the coordinates provided at **Table 1** below.

ID	Easting	Northing	Approximate Altitude (mAOD)
Substation	597015	748535	76

Table 1: Proposed Substation Location

Coordinates provided in Irish Transverse Mercator (ITM)

The electricity substation site is located in a relatively flat area of pastoral grassland; however, there will be a requirement to undertake minor modifications to ground levels in order to achieve a level platform for the control building and electrical equipment. In order to provide a level compound footing, a cut/fill exercise will be implemented where soil from higher elevations will be deposited at areas of lower elevations to avoid the importation of substantial volumes of aggregates. The compound surface will be finished with free-draining crushed stone, such that rainwater can percolate to ground, imported to the site.

The footprint of the substation (overall compound area) will be surrounded by a palisade fence, with associated gates, of c. 2.6m in height for safety and security reasons. The substation will contain a control building and all necessary electrical equipment and apparatus to facilitate the export of electricity to the national grid. Ancillary infrastructure located within the footprint of the compound will include transformers, busbars, line bays, surge arrestors, insulating and earthing equipment, circuit breakers, lighting stands, and lightning masts.

The substation will also contain a control building from which the substation will be operated and maintained. The control building will be constructed of blockwork and will be finished in sand and cement render, slate roof covering and steel doors. The control building will contain a control room to allow operatives monitor and manage the operation of the electrical apparatus and will also include storage and welfare facilities.

Overhead electricity cables, c. 100m, will be installed between the proposed substation and the existing Athlone-Lanesborough 110kV overhead transmission line and will be installed on 2 no. interface masts of c. 15m in height.

Preliminary site plans and drawings are enclosed at **Annex 1**.

3.2 Underground Electricity Cables

The electricity cables will be installed in ducts within a trench approximately 1.2m deep and 1m in width. It is likely that the trench will be located predominately within the paved surface of the above regional and locally-classed public roads; with a short section to be located within private lands as it approaches the proposed electricity substation.

Currently, 2 no. route options are being assessed to determine the presence of environmental constraints and to determine the technical suitability of the route to accommodate the electricity cables. Route Option A would be located within the townlands of Moyvannan, Feamore, Lisbaun, Lissygreaghan, Gortacoosan, Ballycreggan, Corrantotan, Knocknanool, and Ballymullavill; and within the L7551, L2019, L2018, and the R362 to its junction with the R363. At this point, the electricity cables will connect to electricity cables permitted as part of the Seven Hills Wind Farm.

Route Option B would be located within the townlands of Moyvannan, Feamore, Lisbaun, Carrownolan, Carrowncloghan, Carrowkeeny, Ardmullan, Curraghboy, Gortnasythe, Derryglad, Eskerbaun, and Brideswell; and within the L7551, L2019, L2018, L7731, R362, L2023, and L7636. At this point, the electricity cables will connect to electricity cables permitted as part of the Seven Hills Wind Farm.

The routes of the electricity cables are illustrated at **Annex 1**.

4.0 Scope of the EIAR

The EIAR will provide an assessment of effects during the construction, operation and decommissioning of the proposed development for each the environmental topics described in this section.

This section provides a brief overview of the level of scoping which has taken place to date, as well as the potential effects which have been identified and the proposed methodology for further assessment in the EIAR.

4.1 Project Alternatives

Prior to the selection of the development under consideration, the Applicant undertook an extensive iterative process to assess a range of alternatives at both the macro-level and micro-level. The assessment of alternatives ranged from connecting to existing electricity substations, alternative proposed substation locations, alternative substation configurations and designs within the site, and alternative grid connection route options. This process has so far determined that the development as proposed represents the most appropriate solution, both environmentally and technically, having regard to all reasonable available alternatives.

However, the proposed development as described at **Section 3.0** above and illustrated at **Annex 1** remains subject to further revision in line with continued project design work, environmental scoping and ongoing statutory and non-statutory consultation,

4.2 Population & Human Health

As part the scoping process, a desk based review of existing conditions in the area has been undertaken. It is anticipated that, during the construction phase, effects on community, recreation and tourism receptors are likely to be primarily associated with traffic, noise, air quality and water impacts. Once the proposed development becomes operational, effects will be primarily associated with visual and noise effects.

In terms of human health, it is noted that impacts here will be closely linked with other environmental aspects associated with the proposed development which are relevant to human health, namely soils, water, air quality, noise, and radiation. Other effects may include employment effects and impacts on the local economy.

The potential effects identified above along with potential cumulative effects with other wind farms and infrastructure projects, will be considered within the 'Population and Human Health' chapter of the EIAR.

The proposed development includes the construction and operation of electricity infrastructure. The provision of electricity infrastructure, both overhead and underground, of 110kV capacity, is common practice on similar projects throughout Ireland. The type of radiation emitted from this type of electrical infrastructure can give rise to the generation of electromagnetic fields (EMF) which has the potential to affect human health where high levels are experienced.

Potential operational effects are limited to EMF radiation impacts on properties (residential or other uses) within close proximity to the electricity lines or substation compound. The assessment of EMF in the EIAR will focus on the predicted level of the EMF and an evaluation of the predicted level against health protection standards.

The EIAR chapter will also take into consideration the results of other assessments in the EIAR which have relevance to health. Recognised health evaluation criteria will be used and accurate baseline data provided. The findings of these assessments will be cross referenced in order to avoid duplication of findings.

Employment effects and direct expenditure will be quantified using data provided by the Applicant and, where necessary using standard industry data. Opportunities for local business and the local labour market to be involved in supply chain activities will be identified and, where possible, quantified.

4.3 Biodiversity

Early stage biodiversity scoping has been undertaken on the site in order to inform this Preliminary Scoping Report. This scoping process has included both desk based and field based research. The desk based research has included a review of available data sources and this has been supplemented by on-site walkovers and field surveys, including site specific ornithological surveys.

The proposed development is not located within any designated nature conservation areas; however, there are a number of Special Protection Areas (SPA), Special Areas of Conservation (SAC), Natural Heritage Areas (NHA) and proposed Natural Heritage Area within 10km of the proposed development site. Such designated sites include; but not limited to; Lough Ree SPA, Middle Shannon Callows SPA, Lough Croan Turlough SPA, Lough Ree SAC, River Shannon Callows SAC, Lough Croan Turlough SAC, Lough Funshinagh SAC, Carrickynaghtan Bog NHA, Lough Ree pNHA and Lough Funshinagh pNHA.

Other than 1 no. crossing by the underground electricity line over the Cross [Roscommon] Stream (by both Option Route A and Option Route B); which discharges to the Middle Shannon Callows SPA, River Shannon Callows SAC and River Shannon Callows pNHA approximately 9km downstream; there is no evident hydrological connectivity between the proposed development site and any site designated for nature conservation. Notwithstanding the above, the planning application will also be accompanied by a separate Appropriate Assessment Screening Report [and Natura Impact Statement (NIS) if required] which will provide an assessment of the effects on the Natura 2000 network, in accordance with the Habitats Directive.

This early stage scoping work has identified a number of potential biodiversity effects, including:-

- Direct loss of habitat from the construction of the proposed development;
- Direct/indirect damage to adjacent habitats during construction;
- Effects during construction on the hydrology of water dependant habitats;
- Effects on water quality both at a local level and regional level due to pollution run-off during both the construction and operation phases;
- Effects on aquatic species during construction or due to pollution events;
- Disturbance to local wildlife, including loss of habitat, disturbance and displacement;
- Damage to or habitat loss of important wildlife corridors during construction;
- Effects on wintering birds, whereby foraging habitat could be lost; and

- Effects on the conservation status or constituent parts of designated sites.

The EIAR chapter will address the nationally designated sites, avian species, mammals, aquatic habits and species, and invertebrates, including those on and in close proximity to the proposed development site. The ecological evaluation of the site and its biodiversity will be assessed in accordance with recognised best practice manuals. Once a value has been assigned to identified ecological receptors, the potential impact and effect of the proposed development will be fully assessed using the criteria outlined in various guidelines including CIEEM (2016)[1]. The effects will be assessed under a number of parameters such as magnitude, extent, timing, frequency, duration, and reversibility. The impact significance criteria outlined by the EPA (2002 and 2022) will be used where applicable.

The EIAR chapter will also focus on the likelihood for significant effects with other developments and infrastructure projects, including the permitted Seven Hills Wind Farm.

The impact assessment process will involve assigning the receptor a sensitivity rating based on specific characteristics, identifying and characterising the magnitude of effect, and assessing the significance of any residual effects (after mitigation). A series of mitigation measures to minimise any foreseen impacts for the construction, operational and decommissioning phases of the proposed development will be proposed, as required, in the EIAR.

4.4 Land & Soil

As part of the initial scoping process, a desk based review of the existing environment in the area has been undertaken. This review has been supplemented by extensive site investigation works carried out at the proposed substation location including a geophysical survey, boreholes, rotary cores and trial pits.

It is anticipated that, during the construction phase, effects on Land & Soil will primarily be associated with impacts on topsoil, subsoil, and bedrock resulting from excavation activities, potential contamination of soil associated with any leakages or spillages, erosion of exposed subsoil, and potential for ground instability and failure. It is anticipated that any effects associated with decommissioning may be similar but of a reduced magnitude.

In terms of operational phase effects, leaks and spillages from both vehicular traffic and from oils and hydrocarbons have been identified as potential effects. Cumulative effects with nearby developments and infrastructure projects; including the permitted Seven Hills Wind Farm; will also be considered during the EIAR process.

The baseline data gathered during the scoping assessment, identified above, will be supplemented by further site specific studies and assessments within the proposed development site and wider study area.

The impact assessment process will involve assigning the receptor a sensitivity rating based on specific characteristics, identifying and characterising the magnitude of effect, and assessing the significance of any residual effects (after mitigation). A series of mitigation measures to minimise any foreseen impacts for the construction, operational and decommissioning phases of the proposed development will be proposed, as required, in the EIAR.

[1] CIEEM, Guidelines for Ecological Impact Assessment in the UK and Ireland, January 2016.

4.5 Water

An initial desk based review of existing conditions in the area has been undertaken. This has been completed using a series of available desktop resources including mapping and guidance; with localised groundwater and hydrogeological conditions being informed by the site investigations referred to at **Section 4.4** above and through further analyses including the installation of groundwater level data loggers.

It is anticipated that, during the construction phase, effects on the water environment could include:-

- Groundwater levels during excavation;
- Surface water quality;
- Accidental spillage which could result in the release of hydrocarbons during construction and storage;
- Groundwater and surface water contamination;
- Release of cement based products and the associated impact of alkaline in the water supply;
- Morphological changes to surface watercourses and drainage patterns; and
- Effects on hydrologically connected sites.

The effects associated with decommissioning of the proposed development are considered likely to be similar to those associated with construction, but of reduced magnitude.

In terms of operational phase effects, it is likely that progressive replacement of the vegetated surface with semi-permeable or impermeable surfaces could result in an increase in the proportion of surface water runoff reaching the surface water drainage network. During rainfall events, additional runoff coupled with increased velocity of flow could increase hydraulic loading, resulting in erosion of watercourses and impact on aquatic ecosystems.

The baseline data gathered during the scoping assessment, identified above, will be supplemented by further site specific studies and assessments within the proposed development site and wider study area. It is also noted that some of the potential effects associated with the Water environment may be assessed in other chapters of the EIAR e.g. 'Land & Soil'. The EIAR will consider such interactions to ensure that effects are cross-referenced between topics but that duplication of assessment does not take place.

The impact assessment process will involve assigning the receptor a sensitivity rating based on specific characteristics, identifying and characterising the magnitude of effect, and assessing the significance of any residual effects (after mitigation). A series of mitigation measures to minimise any foreseen impacts for the construction, operational and decommissioning phases of the proposed development will be proposed, as required, in the EIAR.

4.6 Air & Climate

A desktop review of available baseline air quality data within the study area has been undertaken using the following data sources:-

- Environmental Protection Agency – National Ambient Air Quality Monitoring Data Archive;
- Environmental Protection Agency – Air Quality in Ireland 2021 Report and previous reports; and,
- Environmental Protection Agency – Integrated Pollution Control Licences.

Effects which may arise, and will be fully evaluated, as a result of the construction phase include:-

- Construction dust emissions and nuisance dust;
- Emissions from Heavy Goods Vehicles (HGVs) and on site construction plant and equipment which may give rise to emissions; and,
- GHG emissions from embodied energy from construction materials will increase Ireland's GHG emissions potentially causing climate change.

Operational phase effects on air quality and climate are likely to be limited to impacts created by emissions from maintenance related vehicular traffic. It is also noted that the proposed development will be intrinsic to the export of renewable electricity from the Seven Hills Wind Farm and will, therefore, cumulatively lead to a net saving in terms of emissions and is, therefore, likely to result in a positive effect. The extent of this effect will be fully quantified.

Overall, the impact assessment process will involve assigning the receptor a sensitivity rating based on specific characteristics, identifying and characterising the magnitude of effect, and assessing the significance of any residual effects (after mitigation). A series of mitigation measures to minimise any foreseen impacts for the construction, operational and decommissioning phases of the project will be proposed, as required, in the EIAR.

4.7 Landscape

The assessment of landscape and visual impacts has two separate, but closely linked, aspects. The first is landscape character impact or landscape impact i.e. the effects of the proposed development on the fabric or structure of the landscape as perceived by people. The second is visual impact i.e. the extent to which the proposed development can be seen in the context of the surrounding landscape within which it is located.

Potential effects include:-

- Effects on landscape features, views, routes, and areas described in the *Roscommon County Development Plan 2022-2028* and Landscape Character Assessment;
- Changes to landscape and townscape character; and,
- Effects on designated landscapes, conservation sites, and other special areas of interest.

In order to assess the magnitude of impact associated with the proposed development, a Landscape and Visual Impact Assessment (LVIA) will be prepared, in accordance with the Guidelines for LVIA (2013[2]). The significance of landscape and visual effects will be assessed in accordance with a significance matrix which is based on the sensitivity of the landscape or visual resource versus the magnitude of impact.

Zone of Theoretical Visibility mapping (ZTV) will be prepared to illustrate the areas where the proposed development will theoretically be visible from as well as highlighting the cumulative visual impact arising from any surrounding or nearby wind energy developments. Photo-realistic images ('photomontages') will also be prepared from a selected range of viewshed locations which are deemed to present a critical view of the proposed development.

Overall, the impact assessment process will involve assigning the receptor a sensitivity

[2] Landscape Institute Publication

rating based on specific characteristics, identifying and characterising the magnitude of effect, and assessing the significance of any residual effects (after mitigation). A series of mitigation measures to minimise any foreseen impacts for the construction, operational and decommissioning phases of the project will be proposed, as required, in the EIAR.

4.8 Cultural Heritage

The proposed development has the potential to have both construction and operational phase effects on features of cultural significance. Potential construction effects include impacts on recorded monuments, impacts on previously unrecorded archaeological remains which may exist within the area of land take, and visual or noise effects during construction.

Operational phase effects are likely to be limited to visual effects on the recorded monuments located within the study area. It is also noted that operational phase cumulative effects on archaeological, architectural or cultural heritage remains could occur in combination with other existing, permitted or proposed developments.

In addition, the visual impact assessment (see **Section 4.7**) will incorporate the effects on archaeological or architectural features in the vicinity.

The impact assessment process will involve assigning the receptor a sensitivity rating based on specific characteristics, identifying and characterising the magnitude of effect, and assessing the significance of any residual effects (after mitigation). A series of mitigation measures to minimise any foreseen impacts for the construction, operational and decommissioning phases of the project will be proposed, as required, in the EIAR.

4.9 Noise & Vibration

The construction and decommissioning of the proposed development has the potential to result in noise & vibration effects. The operation of the electricity substation also has the potential to cause noise. Potential construction phase effects include general construction noise from plant/machinery operating on the site and vibration from construction activities. Potential operational phase effects include noise impacts on noise sensitive locations (e.g. dwellings) emanating from the operational substation.

The EIAR will include a comprehensive noise impact assessment which will identify baseline noise levels, predictive modelling of noise exposure, clearly outline the predicted changes to the noise environment at noise sensitive receptors, evaluate the exposure level against the most recent noise guidelines, and identify any mitigation measures which are applicable/necessary.

Cumulative effects with nearby developments and infrastructure projects, including the permitted Seven Hills Wind Farm, will also be considered during the EIAR process.

4.10 Material Assets

4.10.1 Transport & Access

The assessment of traffic & access will include an examination of the existing road network surrounding the site, as well as reviewing the likely haul route for the delivery of the construction materials and electrical equipment to the proposed development site.

The proposed development is likely to have both construction, operational and decommissioning phase effects in terms of transport & access. Construction and decommissioning phase effects may include increased traffic flows, changes to the traffic composition, traffic disruption, reduction in safety and degradation of road surfaces. Operational stage impacts on traffic are likely to be much less than that associated with the construction stage; however, the level of effect will be examined in line with the operational life span of the proposed development.

The 'Transport & Access' section will undertake a range of including the capacity of the haul route to accommodate construction traffic, an appraisal of any damage to road structures or surfaces, and a traffic impact assessment to determine the effects of construction and operational phase traffic movements. Given that he proposed development will be constructed concurrently with the permitted Seven Hills Wind Farm, the cumulative effects of both developments will be assessed.

4.10.2 Telecommunications

The Telecommunications section will undertake an assessment to determine if the proposed development will result in any impacts on existing telecommunication links. This assessment will be based on a desktop appraisal of existing telecommunication masts in the wider area and consultation with service providers in the region.

4.10.3 Aviation

Given the low altitude of the proposed development, effects on or interactions with aviation receptor are assessed to be unlikely.

5.0 Consultation

5.1 Statutory Consultation

A range of statutory and non-statutory organisations have been and will continue to be consulted with during the scoping process to gather their views on the likelihood of significant environmental effects arising from the construction, operation and decommissioning of the proposed development.

5.2 Public Consultation

Public consultation has been carried out from an early stage in the Seven Hills Wind Farm project. Public consultation will be continued throughout the pre-planning stage as a means of identifying public opinion and guiding the design of the proposed development.

Annex 1 –
Maps and Drawings

PROPOSED ELECTRICITY SUBSTATION

UNDERGROUND ELECTRICITY CABLES
(ROUTE B)

EXISTING 110kV LANESBOROUGH
TO ATHLONE OVERHEAD LINE

UNDERGROUND ELECTRICITY CABLES
(ROUTE A)

POINT OF CONNECTION TO PERMITTED SEVEN HILLS
WIND FARM GRID CONNECTION INFRASTRUCTURE

POINT OF CONNECTION TO PERMITTED SEVEN HILLS
WIND FARM GRID CONNECTION INFRASTRUCTURE

LEGEND:

LANDOWNERSHIP BOUNDARY

Date:	Rev:	Description:	Drawn By:

Prepared By:

Galetech Energy Services
Clondargan, Stradone
Co. Cavan, H12 NV06

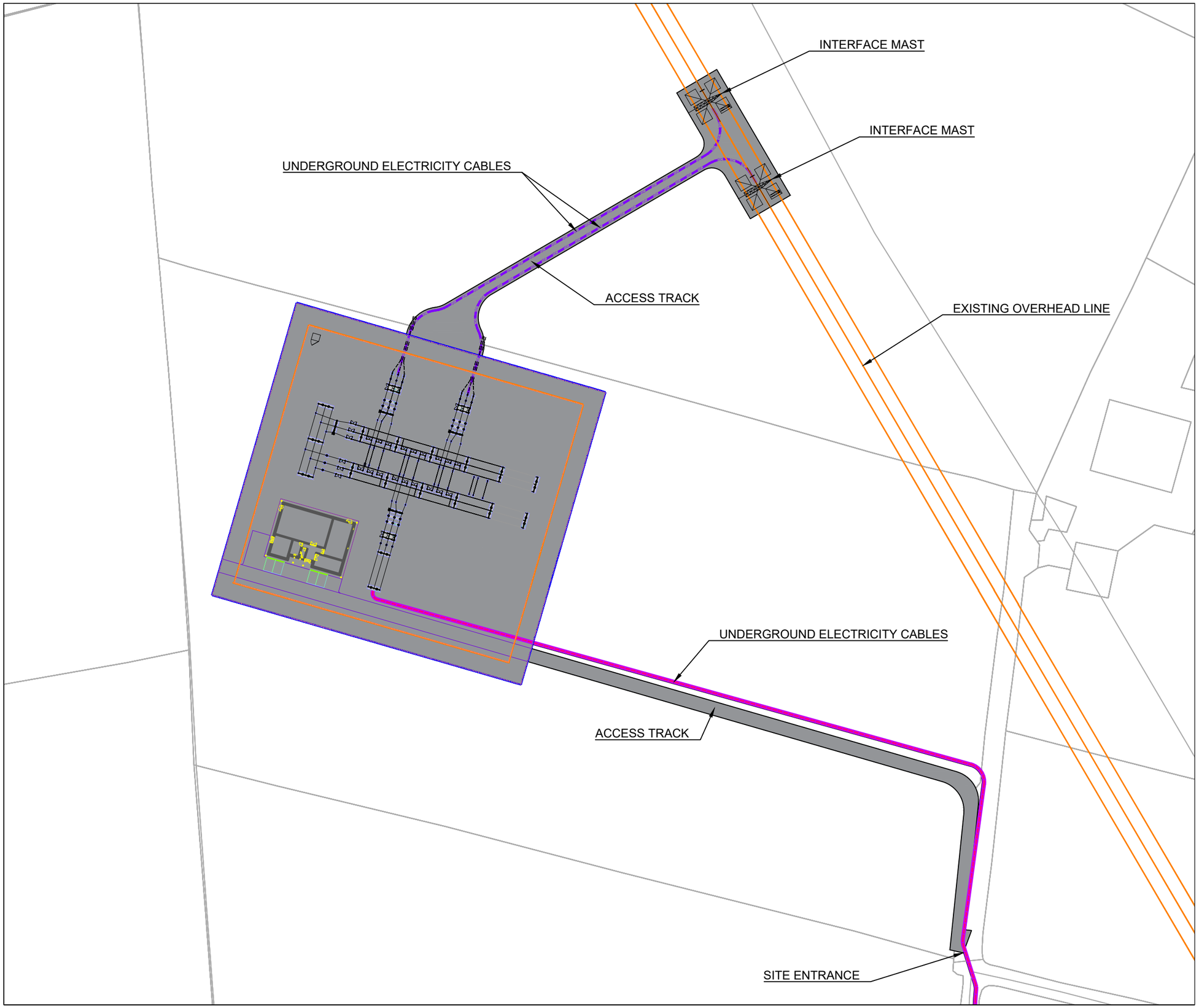
info@galetechenergy.com
www.galetechenergy.com

Client:
ENERGIA RENEWABLES ROI LIMITED

Job Title:
MOYVANNAN ELECTRICITY SUBSTATION

Drawing Title:
FIGURE 1: OVERALL SITE LOCATION

Drawing No.:	Stage:	
SEV001SS_PAS_LOC-0.01	STAKEHOLDER ENGAGEMENT	
Scale: (A3) 1:22,500	Date: 26/02/2024	Revision No.: REV 0
Drawn By: JB	Checked By: SC	Confirmed By: SC



LEGEND:

LANDOWNERSHIP BOUNDARY

N

Date:	Rev:	Description:	Drawn By:

Prepared By:

Galetech Energy Services
Clondargan, Stradone
Co. Cavan, H12 NV06

info@galetechenergy.com
www.galetechenergy.com

Client:
ENERGIA RENEWABLES ROI LIMITED

Job Title:
MOYVANNAN ELECTRICITY SUBSTATION

Drawing Title:
FIGURE 2.01: INDICATIVE SUBSTATION LAYOUT AND LOOP IN / LOOP OUT CONNECTION

Drawing No.:	Stage:	
SEV001SS_PAS_LAY-0.01	STAKEHOLDER ENGAGEMENT	
Scale: (A3) 1:1,250	Date: 26/02/2024	Revision No.: REV 0
Drawn By: JB	Checked By: SC	Confirmed By: SC

LEGEND:

LANDOWNERSHIP BOUNDARY

N

Date:	Rev:	Description:	Drawn By:

Prepared By:

Galetech Energy Services
Clondargan, Stradone
Co. Cavan, H12 NV06

info@galetechenergy.com
www.galetechenergy.com

Client:

ENERGIA RENEWABLES ROI LIMITED

Job Title:

MOYVANNAN ELECTRICITY SUBSTATION

Drawing Title:

FIGURE 2.02: INDICATIVE SUBSTATION LAYOUT AND LOOP IN / LOOP OUT CONNECTION

Drawing No.:	Stage:	
SEV001SS_PAS_LAY-0.02	STAKEHOLDER ENGAGEMENT	
Scale: (A3) 1:1,250	Date: 26/02/2024	Revision No.: REV 0
Drawn By: JB	Checked By: SC	Confirmed By: SC