

Elgin Energy Services Ltd

Report to Inform EIA Screening

Proposed 110kV Substation and Associated Grid Connection Infrastructure



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1.0 Introduction and Background

1.1 Purpose of Report

Tetra Tech has been instructed by the Prospective Applicant, Elgin Energy Services Limited, to prepare this *Report to Inform Environmental Impact Assessment Screening* for submission as part of section 182E(1) (of the Planning and Development Act 2000 as amended (hereafter referred to as the Act)) pre-application consultation with An Coimisiún Pleanála (ACP or the Commission). The proposed development will consist of a 110kV C-type electricity substation and associated loop-in loop-out infrastructure connecting with an existing 110kV overhead transmission line. The proposed development will be on an approx. 6.5 ha site in the townlands of Cuilnacapp, Park and Moneenroe near Creggs village, County Galway.

This report is submitted to assist the Commission in determining whether it requires an Environmental Impact Assessment Report (EIAR) to be submitted with the proposed application or not.

1.2 Project Context & Background

On 18th March 2024, Galway County Council (GCC) issued a grant of permission under GCC Reg. Ref. 23/60875 for the development of a solar farm comprising solar panels, enhanced vehicular entrances, access tracks, landscaping, security and ancillary electrical infrastructure. The permitted development has a maximum export capacity of 75MW, has an operational lifespan of 40 no. years in duration and extends to a total site area of approximately 107.4 hectares. The permitted application identified the general location of the subject substation site in its planning application plans and particulars.

The proposed development consists of a 110kV C-type electricity substation and loop-in grid connection to the existing Lanesborough to Cloon 110kV overhead line (OHL).

The proposed substation will facilitate the connection of a solar farm, permitted under GCC Reg. Ref. 23/60875, to the national transmission network. The documentation submitted to GCC as part of the solar farm application referenced the need for a substation for transmission of the electricity generated to the national grid. However, the development of the substation and grid connection did not form part of the application. Therefore, as explained in that application, the substation and grid connection could not form part of that planning application as it comprises of transmission development for which permission is required to be sought under section 182A of the Act.

1.3 Brief Description of Nature and Extent of Proposed Development

Accordingly, permission is now proposed to be sought under section 182A for the proposed development of a 110kV C-type 4-bay electricity substation along with loop-in loop-out grid connection to an existing 110kV transmission line. The proposed development will also include vehicular access from the public road comprising a new access track. The proposed development will facilitate the export of electrical energy from the permitted solar farm to the national grid.

The proposed substation will be constructed by the applicant to required EirGrid specifications and ownership of the relevant portion of the substation will be transferred to EirGrid following its construction.

1.4 Scope of this Report

This Report will firstly examine whether the development would require mandatory EIA. Secondly, if the development falls within a class of development for EIA, but is sub-threshold, the report considers whether the development is likely to have significant effects on the environment and accordingly if sub-threshold development EIA is required in the Planning and Development Regulations 2001 (as amended) (hereafter *the Regulations*).

In this regard we note that Schedule 7A of the Planning and Development Regulations 2001 (as amended) (hereafter *the Regulations*) sets out information to be provided for the purposes of screening sub-threshold development that should include:

1. *“A description of the proposed development, including in particular—*
 - (a) description of the physical characteristics of the whole Proposed Development and, where relevant, of demolition works, and*
 - (b) description of the location of the Proposed Development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.*
2. *A description of the aspects of the environment likely to be significantly affected by the proposed development.*
3. *A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from—*
 - (a) the expected residues and emissions and the production of waste, where relevant, and*
 - (b) the use of natural resources, in particular soil, land, water and biodiversity.*
4. *The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7.”*

In accordance with the above provisions set out in the Regulations, this Report provides information as set out below:

- **Section 2** of this Report considers whether the development falls within a class of development for EIA and whether mandatory EIA is required and in the alternative if screening of the development for potential sub-threshold development EIA is necessary;
- **Section 3** of this Report outlines the description of the proposed development;
- **Section 4** of this Report sets out the location of the proposed development;
- **Section 5** of this Report considers the potential and likely effects of the proposed development;
- **Section 6** of this Report provides a summary of the above and a conclusion on whether the development is likely to have significant effects on the environment.

2.0 Mandatory EIA Screening and Consideration of EIA Classes for Potential Sub-Threshold EIA

2.1 Legislative Context for EIA

The requirement for EIA of a project is set by EU Directive 85/337/EEC as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC which were codified and replaced by Directive 2011/92/EU as further amended by Directive 2014/52/EU, on the assessment of the effects of certain public and private projects on the environment (known as the ‘EIA Directive’). The EIA Directive requires that certain developments be assessed for likely environmental effects (i.e. subject of environmental impact assessment).

The EIA Directive was transposed into Irish legislation by the Planning and Development Act 2000, as amended and the Planning and Development Regulations, 2001, as amended (the Regulations), as well as a number of other relevant statutes.

Part 1 of Schedule 5 of the Regulations lists projects included in Annex I of the Directive which includes developments that are considered to automatically require EIA to be carried out. Part 2 of the same Schedule of the Regulations outlines thresholds for other projects which also require EIA, as per Annex II of the Directive.

2.2 EIA Screening Process

The EIA Screening process firstly determines whether there is a ‘mandatory’ requirement for EIA. In cases where it is determined that there is no ‘mandatory’ requirement for EIA, but where the development comprises a sub-threshold class of EIA development, the EIA Screening process advances to examine whether there is a non-mandatory, ‘sub-threshold’ requirement for EIA. This is an assessment that is based upon the likelihood of significant environmental effects arising due to the project.

Following advice set out in the ‘*Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*’ (August 2018)¹, the ‘Source–Pathway–Target’ model is applied based on professional expertise and experience. Appendix IV of the above Guidelines state that the *Source–Pathway–Target Model* consists of:

“A model identifying the source of likely significant impacts, if any, the environmental factors which will potentially be affected and the route along which those impacts may be transferred from the source to the receiving environmental factors.”

This method is considered appropriate and acceptable when applied having regard to the criteria set out in Schedule 7 of the Regulations. The *source-pathway-target model* is an accepted method of identifying whether significant effects are likely to arise. The method includes three items for consideration:

- the source of likely impacts;
- the environmental factors that could potentially be affected; and
- the pathway by which those impacts may occur.

This methodology is consistent with the procedural steps contained in *The European Commission Guidelines on EIA Screening* (June 2001) and with the most up to date (non-statutory) guidance note available to local authorities, prepared by the Office of the Planning Regulator (*OPR Practice Note PN02*).

¹ <https://www.gov.ie/en/publication/53aee9-guidelines-for-planning-authorities-and-an-bord-pleanala-on-carrying/>

Specific reference is made to the *OPR Practice Note PN02* due to its clear and transparent 3-Step approach in the determination of the Screening process as illustrated in **Figure 2-1**. As set out in the Note, following preliminary examination of the project, if there is significant doubt regarding the likelihood of significant effects arising, then a screening exercise and associated determination needs to be based on the criteria of Schedule 7 and the information of Schedule 7A of the Regulations.

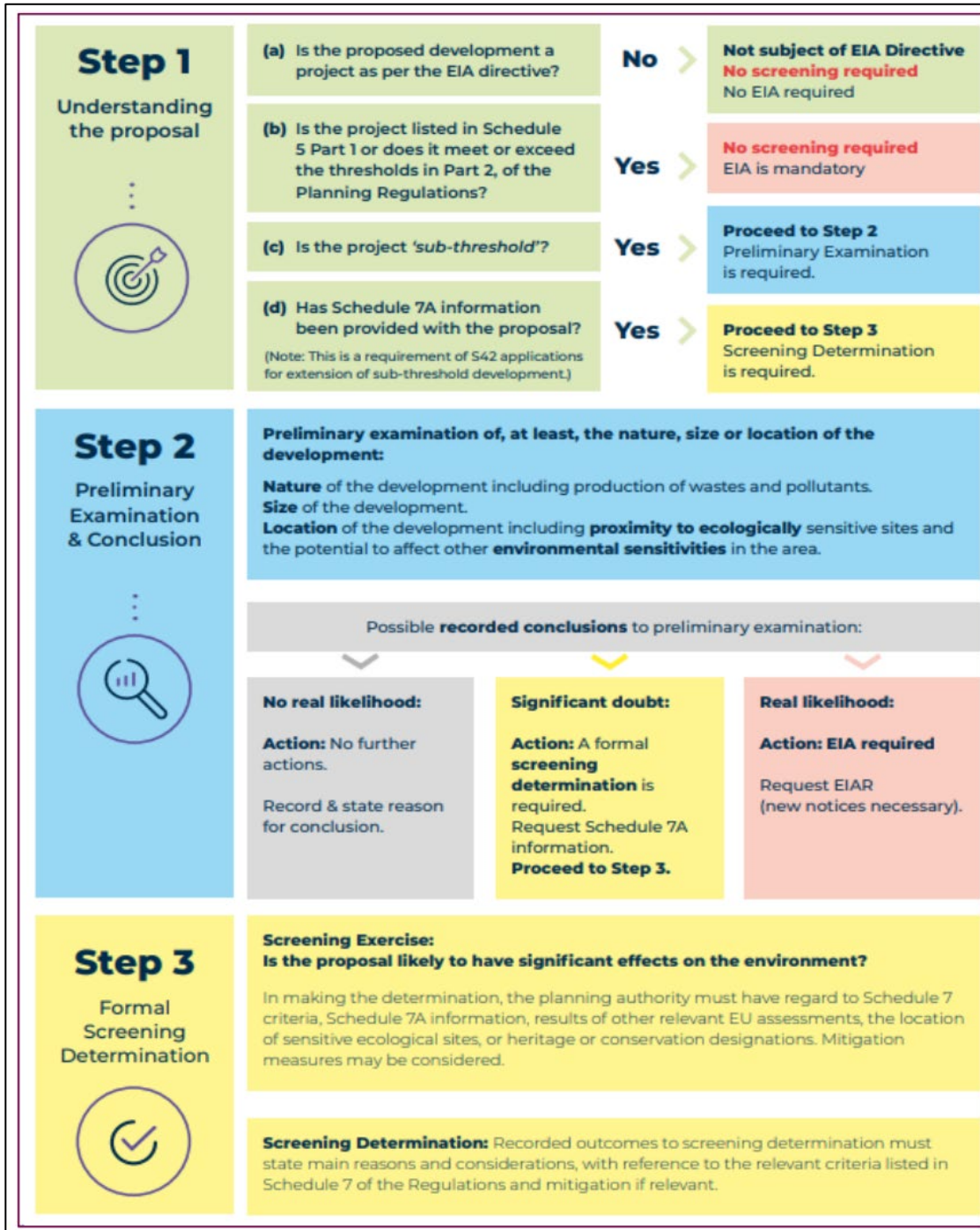


Figure 2-1: OPR Practice Note PN02 Environmental Impact Assessment Screening Step-by-Step Approach to EIA Screening for Development Proposals²

2.3 Screening for Mandatory EIA

2.3.1 Schedule 5 Part 1 of the Planning and Development Regulations

Item 20 of Part 1 of Schedule 5 specifies the following class of development for EIA:

“Construction of overhead electrical power lines with a voltage of 220 kilovolts or more and a length of more than 15 kilometres.”

The proposed development does not fall under this requirement as it incorporates an overhead line of 110kV and is also of a much shorter distance. No other provisions of Part 1 relate to any types of electrical transmission development including the substation element itself or to any other elements of the proposed development including the proposed access.

2.3.2 Schedule 5 Part 2 of the Planning and Development Regulations 2001

A number of classes of development set out in Schedule 5 Part 2 of the Regulations were identified as potentially relevant for further consideration. These are listed in **Table 2-1** along with a consideration of their applicability in the case of the proposed development.

Table 2-1: Consideration of Classes of Development of Part 2 of Schedule 5 of the Planning and Development Regulations 2001 (as amended)

Schedule 5 Part 2 Reference	Proposed Development	Applicability of Class of Development
Schedule 5 Part 2 3(b) states: <i>“Industrial installations for carrying gas, steam and hot water with a potential heat output of 300 megawatts or more, or transmission of electrical energy by overhead cables not included in Part 1 of this Schedule, where the voltage would be 200 kilovolts or more.”</i>	Provision of Substation and 110kV overhead loop-in loop-out connection	This class could potentially apply. The loop-in loop-out infrastructure (if overhead) comprises transmission of electrical energy by overhead cables not included in Schedule 1. However, the proposed voltage of 110kV is below the 200kV threshold that is specified in this class. The substation does not fall within this class as confirmed by An Coimisiun Pleanála in respect of similar previous applications. Thus, while EIA is not mandatory under this Class, it could potentially be required for a sub-threshold class of development if the overhead loop in loop out connection was progressed and if the development was likely to have significant effects on the environment.

² Source: OPR Practice Note PN02

Schedule 5 Part 2 Reference	Proposed Development	Applicability of Class of Development
Schedule 5 Part 2 15 states: <i>“Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.”</i>	110kV overhead loop-in loop-out connection.	This class could potentially apply. We have identified above that the 110kV overhead lines could fall within class 3(b) but below the relevant thresholds. Thus, if the proposed development was likely to have significant effect on the environment with regard to the criteria of Schedule 7, then this class could apply.

From **Table 2-1** it is considered that the proposed development does not require mandatory EIA under Schedule 5 Part 2 of the Regulations. However, it is considered that the proposed development could fall within the provisions of Class 3(b), albeit sub-threshold if the overhead connection option was progressed for the application. Accordingly, a sub-threshold development screening exercise is appropriate to determine if EIA is required for the proposed development on the assumption that the grid connection will be overhead. This is addressed in **Sections 3 – 5** of this report.

2.4 Approach to Sub-Threshold Development Screening

The sub-threshold screening exercise presented in the following sections of this report have regard to the provisions of both Schedule 7 and 7A of the Regulations. In this regard Sections 3 – 5 comprise the following:

- Section 3: Description of Proposed Development. This presents a description of the physical characteristics of the proposed development (per Item 1(a) of Schedule 7A) with regard and reference to the criteria of Item 1 of Schedule 7).
- Section 4: Location of the Proposed Development. This presents a description of the site and surrounding context with particular regard to any environmental sensitivities of the geographical area likely to be affected (per Item 1(b) of Schedule 7A) with regard and reference to the criteria of Item 2 of Schedule 7A).
- Section 5: Consideration of Potential and Likely Significant Effects. This identifies the aspects of the environment likely to be affected by the development and describes the likely significant effects thereon (per Items 2 and 3 of Schedule 7A) with regard and reference to the criteria of Item 3 of Schedule 7).

The following reports previously prepared as part of the solar farm application to Galway County Council under GCC Reg. Ref. 2360875 have been taken into consideration in this sub-threshold assessment.

- *Creggs Solar Farm Archaeological Assessment, 2023* prepared by John Cronin and Associates
- *Creggs Solar Farm Ecological Impact Assessment, 2023* prepared by RPS

3.0 Description of Proposed Development

3.1 Size and Design – Physical Components

3.1.1 General Content of Proposed Development

The proposed development comprises a 110kV C-type electricity substation and associated loop-in infrastructure to tie into an existing 110kV overhead transmission line. The following sections set out a description of various elements of the proposed development. Further details are presented within accompanying drawings also forming part of the pre-application consultation submission to ACP.

The proposed development comprises a number of elements as set out below:

- 110kV C-Type substation compound (including Eirgrid compound (110kV) and customer compound (MV));
- Loop in proposal to connect to the national grid;
- Fencing;
- Vehicular access from public road via upgraded existing private road and new access track;
- Landscaping;
- Lighting;
- Temporary construction compound (location to be determined); and
- Surface water drainage proposals.

On completion of the substation and loop in construction, ownership of the line and the 110kV compound will transfer to EirGrid. The MV customer compound (IPP Compound) within the overall substation development will remain in the ownership of the solar farm operator. The proposed site layout is shown in **Figure 3.1**.

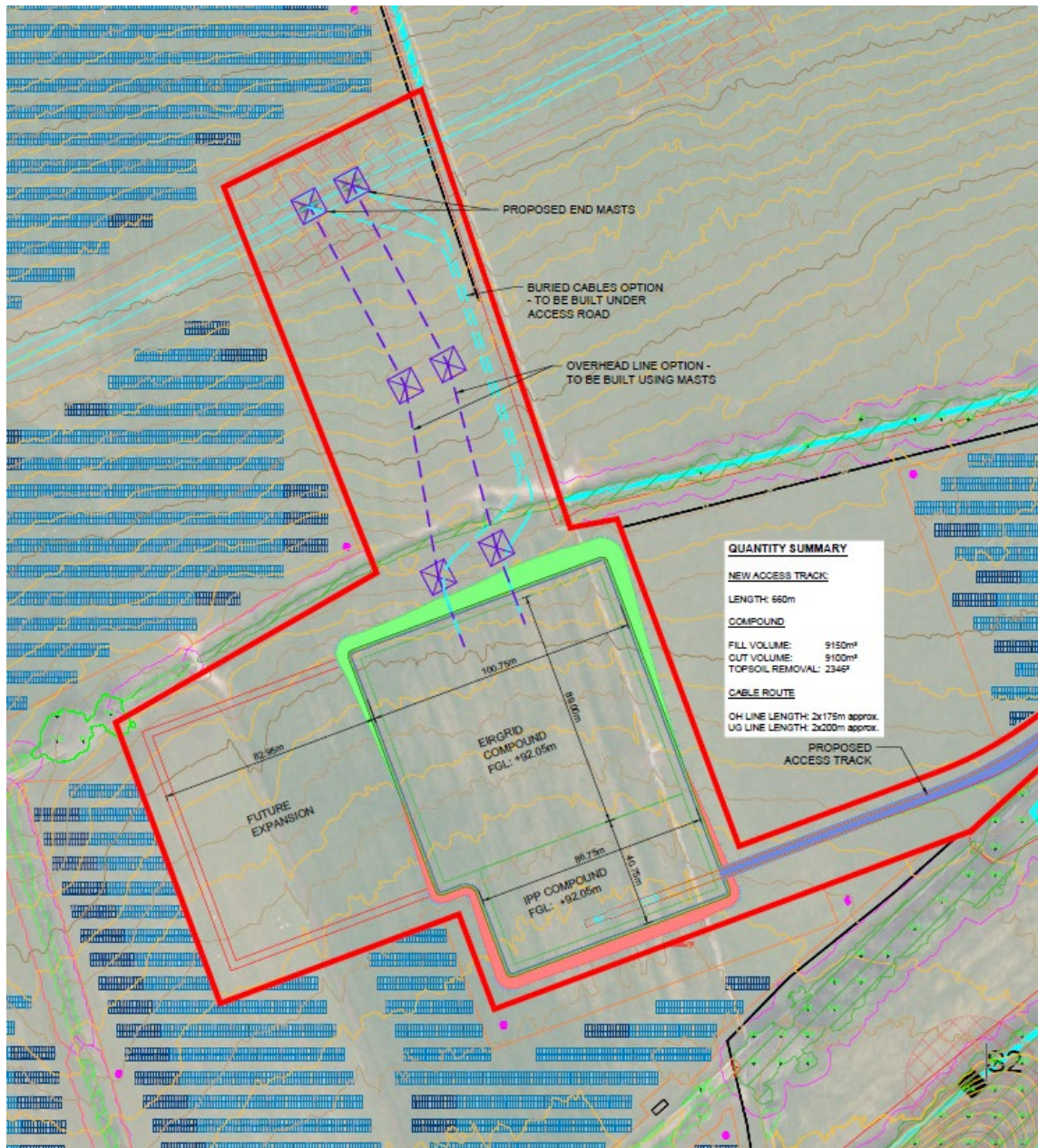


Figure 3-1 Proposed Site Layout

Source: *Proposed Substation Compound Platform Optimisation – Option A by Afry Ireland Ltd (Drwg No. CREG.d005.1.1)*

3.1.2 110kV C-Type Substation Compound

Figure 3-2 below and the accompanying Drawing No. ELGIN-SUBSTATION-006 presents a Conceptual Design of an EirGrid Layout Plan for a C-Type 110kV substation with 4 bays. While this illustrates an indicative layout for the proposed Type-C substation, and it is expected the final layout and design will be confirmed prior to the application being lodged with ACP.

The overall C-Type substation compound will consist of an area of the order of 13,000 m² that will be split into two areas consisting of an EirGrid C-Type Station compound and a customer compound.

The customer compound will incorporate a Medium Voltage (MV) switchgear room. The MV electricity generated at the solar farm will be increased to 110kV via a 110kV transformer within the customer compound. The electricity will then travel on to the EirGrid 110kV substation which will comprise of a Control

110kV Substation and Grid Connection – Creggs Solar Farm

Building and electrical infrastructure. From the EirGrid 110kV compound electricity can be exported at to the existing 110kV transmission network.

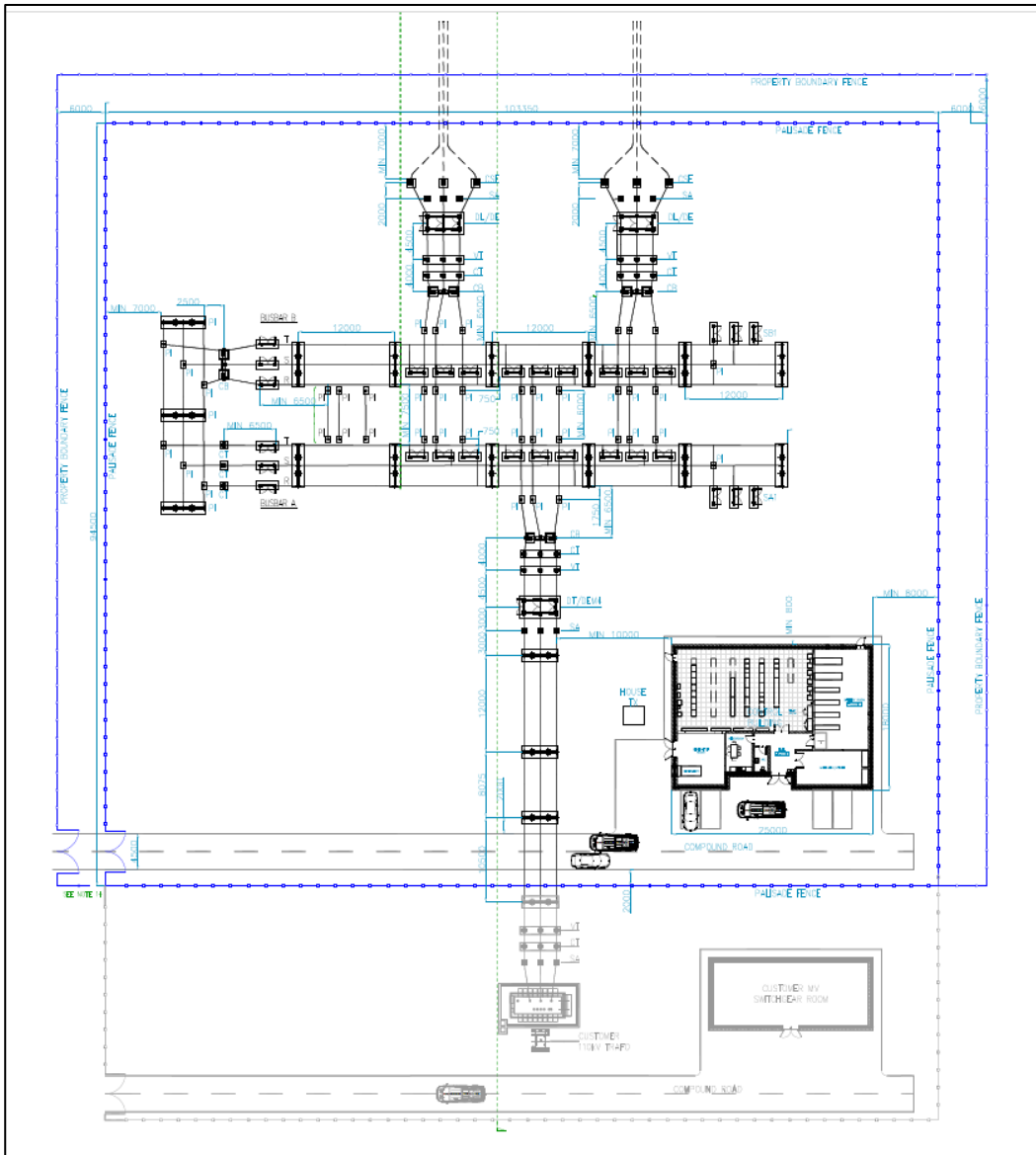


Figure 3-2: Typical Layout of a C-Type Substation

Source: 110kV Substation Sheet 1 Drawing prepared by Elgin

3.1.3 Loop In proposals to connect to the national grid

There is an existing 110kV OHL electricity transmission line that travels across the northern part of the site of the permitted solar farm. This line runs from Lanesborough in County Longford to Cloon in County Galway.

It is proposed to break the existing 110 kV overhead line and loop in and out of it a connection to the proposed substation. For the overhead option, two new end towers 15 – 30m high will form a break in the existing line. The exact height of the towers shall be defined within the application. From these new towers the 110kV OHL to be rerouted into and out of the new substation. The overhead conductor which will be supported by two new pairs of towers before it reaches the proposed substation compound. The three new pairs of towers shall be secured in concrete foundations, the exact specifications of which shall be determined at a later stage subject to ground conditions and electrical load calculations.

An anti-climb guard shall be provided on each tower for security.

Figure 3.3 presents a typical detail of the 110kV end towers.

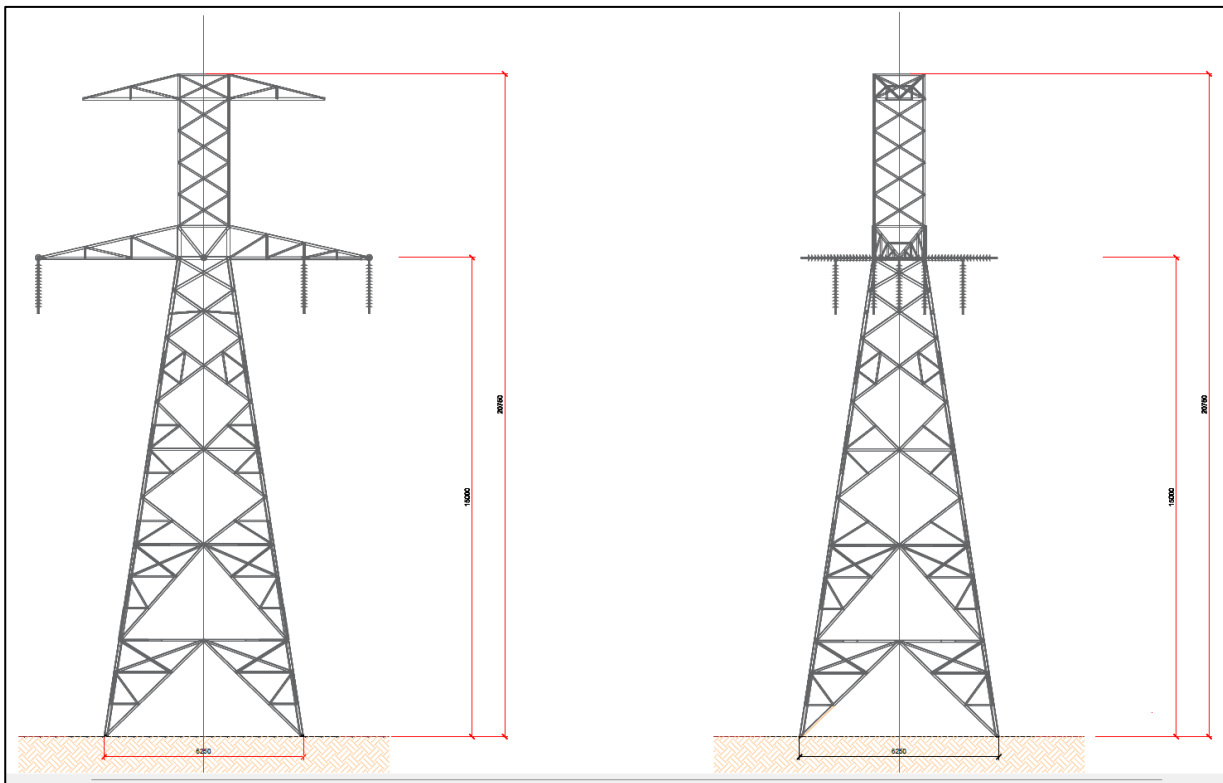


Figure 3-3: Typical Overhead Line Interface Tower

Source: *Typical 110kV Overhead Line Interface Tower* Drawing prepared by Eirgrid

3.1.4 Access

Access to the north and west portions of the solar farm as permitted under Planning Reg. Ref. 23/60875 will be via an up upgraded existing private road which adjoins the L2316 adjacent to its junction with the R362. This existing private road currently provides access to Creggs House and agricultural lands only. Creggs House and associated farm buildings are the property of the landowner of the permitted solar farm site. A new passing bay on the private road was permitted under Planning Reg. Ref. 23/60875.

Access now proposed to the substation will be from the same s private road junction with the L2316 as identified in the solar farm application. However, a new access track will be formed off the permitted track turning northwest approx. 360m in from the L2316 junction. This new access will serve the proposed substation. The proposed access will be 4.5m wide.

3.1.5 Fencing

The proposed substation development will be located within the overall solar farm development as permitted under GCC Reg. Ref. 2360875 and therefore will benefit from the security function of the permitted perimeter boundary fencing arrangements surrounding the overall solar farm site. Given the additional access track proposed for the fencing will be extended to include this area.

Palisade fencing is proposed around the entire substation compound as shown in EirGrid Drawing No. ELGIN-SUBSTATION-006 to provide specific security and protection for the substation infrastructure. The customer compound will also be physically separated from the EirGrid side of the compound by further palisade fencing.

3.1.6 Lighting

There will be lighting provided within the substation site which can be turned on if necessary. However, the substation will be operated remotely and will not have a daily presence on site that would require regular lighting. Lighting will be switched on infrequently if necessary for maintenance purposes.

3.1.7 Temporary Construction Compound

A temporary construction compound will be required for the substation construction. It is likely that the contractor for the substation will be different to the contractor for the solar farm construction and that separate construction compounds will be required.

The compound for the substation will be located within or adjacent to the application site with the exact location being confirmed by the contractor when appointed.

The compound will be removed after works on site are completed.

3.1.8 Surface Water Drainage Proposals

Run off from building roofs within the compound will be directed to soakaways within the compound footprint. Run-off from any impermeable surfaces within the compound, such as plant slabs and plinths, will be 'over-the-edge' to impermeable surfaces for filtration to ground.

3.2 Other Development Identified for Potential Cumulative Impact

The development of this substation is to facilitate the connection of the permitted Creggs solar farm to the national electricity grid. The permitted solar farm development was considered not to be a development for which EIA was required. This screening assessment considers potential cumulative impacts that could arise from the proposed development in combination with other known permitted projects in the area.

A review has been undertaken to identify other permitted projects (including approved projects that have been appealed and a decision is pending), that may have potential for cumulative or in combination impacts with those of the proposed substation and associated infrastructure development. A review was carried out of the planning files from the following databases:

- Galway County Council planning section;³
- Roscommon County Council planning section;⁴
- Myplan.ie;⁵
- An Bord Pleanála;⁶ and
- Department of Housing, Planning and Local Government (DHPLG) Environmental Impact Assessment (EIA) Portal.⁷

³ <https://www.galway.ie/en/services/planning/online/>
⁴ <https://www.roscommoncoco.ie/en/services/planning/>

⁵ <https://www.myplan.ie/national-planning-application-map-viewer/>

⁶ <https://www.pleanala.ie/en-ie/home>

⁷ <https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1>

The scope of the search was based on valid planning applications within the last 5 no. years within a 5km radius from the approximate centre point of the proposed development. Small scale residential and extension type developments along with minor amendments, changes of use and small-scale farming/agricultural applications were omitted from the search.

Appendix A identifies 6 No. nearby projects. Two of these (a telecoms structure and upgrade of facilities at Greggs Rugby Club) which have already been implemented, have no potential for interaction with the proposed development during construction or operation and accordingly no potential for cumulative impact. The third complete project is the upgrade of the Cloon to Lanesborough 110kV transmission line into which the proposed development will connect. While the development will directly impact the line as it will break into it, it does not have potential for cumulative construction or operational impacts. A further two projects are located in the village of Creggs at the GAA pitch and school. These have no physical connection to the site of the proposed development and have no potential operational interactions. The main area of potential cumulative impact of these projects with the proposed substation, is if construction was to coincide it would result in increased construction traffic on the wider local road network. The last project identified is the permitted Elgin Energy Services Ltd. solar farm itself. It is intended that construction of the solar farm will be undertaken in parallel with that of the substation, so it is considered to have potential for cumulative impact with the substation development. Further discussion of the likely significance, or otherwise, of such cumulative impact, is considered in **Section 5.10**.

3.3 Nature of any Associated Demolition Works

There are no demolition works proposed as part of the proposed development.

3.4 Use of natural resources, in particular Land, Soil, Water and Biodiversity

The proposed development will require the use of approximately 6.5ha of land currently in agricultural use.

Material excavated during construction, if deemed to be suitable, will be reused onsite. Natural aggregate materials required for construction of the proposed development will mainly consist of higher-grade materials not available on site, e.g., stone material for foundations, and concrete for the construction of the hard standing areas. Concrete and additional aggregate material required for construction will be sourced from authorised facilities. The use of natural rock and aggregate material resources associated with the development is unlikely to affect overall regional resources.

The proposed development will require topsoil stripping of approximately 1.6ha of land with associated removal of lower ecological value improved agricultural grassland.

During both the construction and operational phases, water demand for the proposed development will be minimal.

3.5 Production of Waste

During construction of the proposed development, it is anticipated that all soils, subsoils and stone generated from excavation works associated with the construction phase will be retained on site within the development boundary and reused in landscaping and reinstatement of the temporary construction compound.

Other construction phase wastes associated with the proposed development may consist of surplus hardcore, stone, concrete, ducting, electrical wiring, spare steel reinforcement, metal off-cuts shuttering timber, plastic waste, packaging, unused oil, diesel and domestic refuse waste generated by contractors. The types of wastes to be generated will be similar to established construction waste streams and will not

require unusual or new treatment options. All waste will be segregated on site and will be removed from site by licensed operators to be reused, recycled or disposed of as appropriate off site. Other than fuel waste, no hazardous waste is anticipated

The operational aspect of the proposed development would produce a minimal amount of waste. Wastes arising from the general operation and maintenance would principally include residual lubricating oils, cooling oils, packaging from spare parts, any interceptor silts and oils and sanitary wastewaters. All wastes will all be removed from site and reused, recycled or disposed of in an authorised facility in accordance with best practice.

3.6 Pollution and Nuisances

During the construction phase, potential pollution sources, pathways and nuisances include:

- Increases in exhaust emissions to air as a result of construction machinery and traffic. Emissions to the atmosphere would be short-term temporary in nature and would unlikely result in quantifiable or lasting negative effects on air quality.
- Noise and vibration from equipment use.
- Dust generation from construction activities.
- Runoff of material to, and sedimentation of, nearby watercourses.

The likelihood and severity of these effects will be managed through compliance with best practice construction management practices which will be defined in a Contractor's CEMP. Likely pollution and nuisances associated with construction are limited.

During the operational phase the substation will generally be unmanned, with the exception of occasional operational visits. At the operational phase the substation will emit noise associated with a typical substation of this nature, with the transformer being the main source of noise generation.

3.7 Risk of Major Accidents, and/or Disasters

The risk of major accidents and/or disasters during the construction and operational phase from the overall project is low given the nature and type of site activities. The proposed development is not subject to the Seveso Directives or COMAH Regulations.

The implementation of appropriate control measures (including an emergency spill response plan) and best management practices will reduce the risk of accidents from polluting substances entering soil and groundwater.

There have been no recorded landslide events at the subject site of the proposed development. Due to the local topography and the underlying strata, there is a negligible risk of a landslide event occurring at the site.

The OPW flood map has been consulted and it has identified that the site is outside of Flood Zones A and B as defined in the Flood Risk Management Guidelines.

It is considered the proposed development is most unlikely to result in a major accident or disaster given its type, size and scale and the standard measures that would be included in its design and implementation.

3.8 Risks to Human Health

A Project Supervisor Construction Stage (PSCS) will be appointed for the construction phase of the proposed development. The PSCS will be responsible for managing and co-ordinating the safety and health issues onsite in accordance with best practice and current legislation.

A CEMP will be prepared and adhered to during the construction phase to manage potential risks of pollution and nuisances and to ensure the implementation of best practice construction methodologies. During its operational phase no emissions to air or water are envisaged.

DRAFT

4.0 Location of Proposed Development

4.1 Site Location

The proposed 110kV substation and associated overhead infrastructure are located in the townlands of Cuilnacapp, Park, and Moneenroe, near Creggs village, County Galway. **Figure 4-1** below shows the general location of the proposed substation in red, in the context of the permitted solar farm which it will serve (outlined in blue) and the wider surrounding context. The subject site is in a rural area, approximately 900m southeast of the village of Creggs in northeast Galway.

4.2 Existing and Approved Land Uses

The substation element of the proposed development will be located within the development boundary of the permitted solar farm as shown in **Figure 4-1**. The overhead infrastructure connecting to the existing national grid infrastructure will not extend beyond the site boundary of the permitted solar farm.

The proposed development and permitted solar farm which it will serve are located within a rural environment comprising of agricultural lands circa 1km to the south of Creggs, County Galway. There is an existing network of local roads in the general area including the local road, the L2316, and regional roads including the R360 and R362.

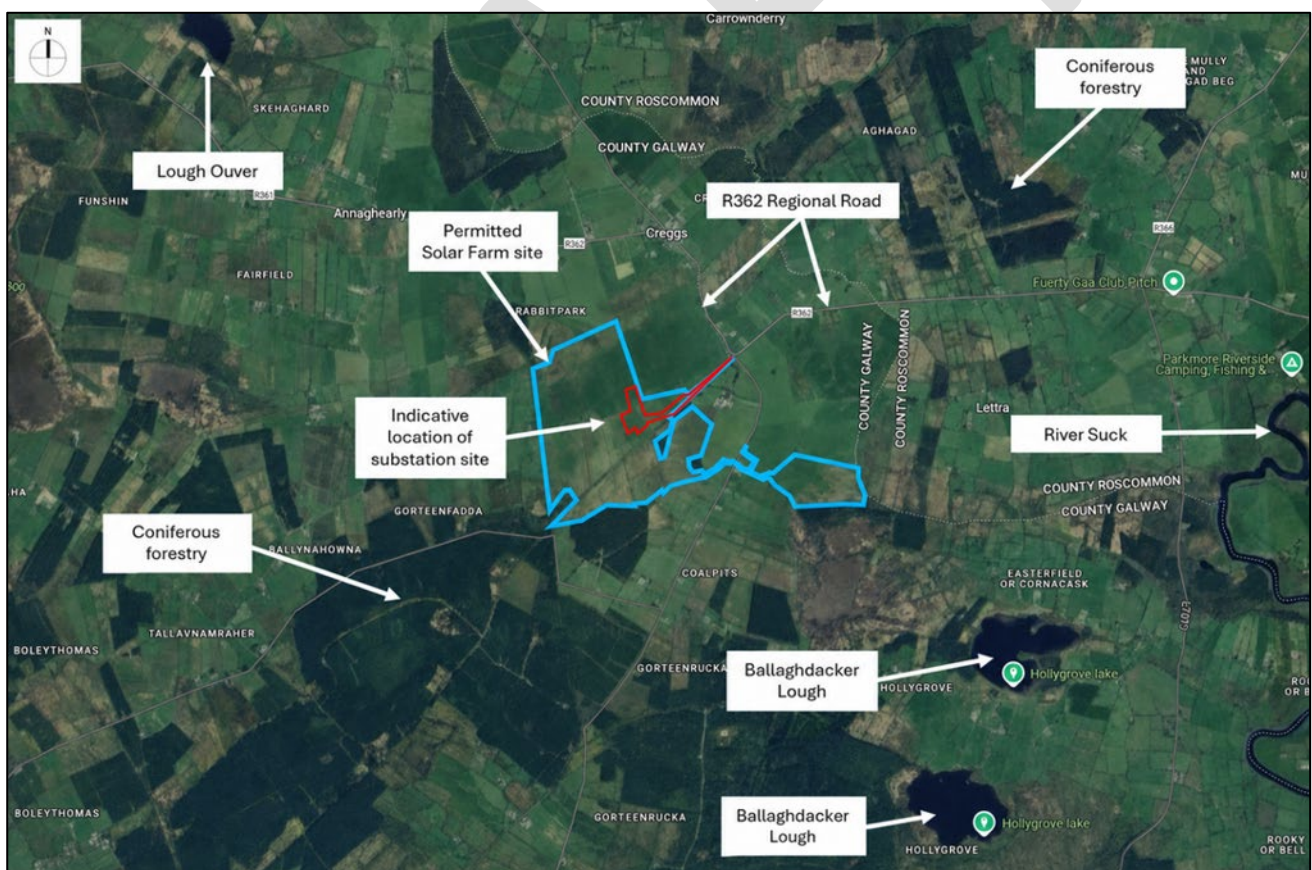


Figure 4-1: Aerial Photo Identifying Approximate Location and Extent of Site of Proposed 110kV Substation

Source: Google Maps (annotations added by Tetra Tech)

The substation is proposed within a field that is currently in agricultural use. The wider area generally comprises of agricultural lands, areas of coniferous forestry, and a number of lakes. It is noted that the construction of the permitted solar farm development has not yet commenced and that the permitted solar farm lands remain in agricultural use.

The Lanesborough to Cloon 110kV overhead line (OHL) runs in a northeast to southwest direction across the agricultural fields to the north and northwest of the site. It is noted that part of the line crosses the solar farm development site, with 4 no. sets of existing twinset poles within the solar farm site.

The closest property to the substation site is Creggs House and associated farm buildings which are in the ownership of the solar farm and substation site landowner.

4.3 Access

The proposed development will be accessed via a proposed new access track off the existing private road from the R362 that is located to the east of the proposed development site. **Figure 4-2** shows the location of the proposed substation and adjacent features including the R362 junction with the private road.

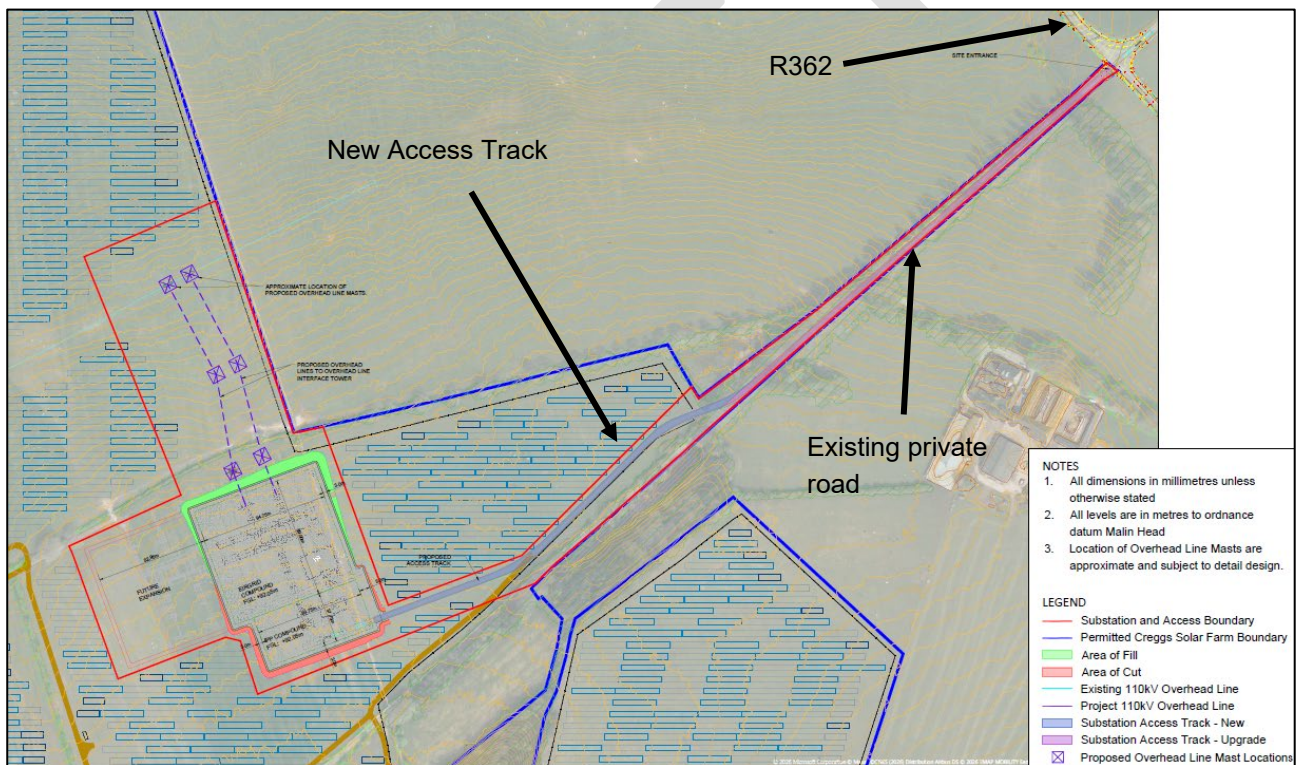


Figure 4-2: Access Arrangements Source: *Proposed substation compound overview – Option A by Afry* (Drwg no. CREG.d005.1.0)(annotations added by Tetra Tech)

4.4 Environmental Sensitivities of Site and Surrounding Context

4.4.1 Relative Abundance, Availability, Quality and Regenerative Capacity of Natural Resources

No scarce or particularly high quality natural resources are identified at the subject site which could potentially be impacted by the proposed development. We consider the potential presence of soil, land, water and biodiversity based natural resources hereunder.

4.4.1.1 Soil

Figure 4.3 presents an extract from the Teagasc Soils mapping available on the Geological Survey Ireland website. The site is located on mineral poorly drained soils (mainly acidic). These soils are widespread in areas to the north in Sligo and Mayo with mineral soils becoming more basic than acidic to the south of Creggs and intermingled with peaty soils.

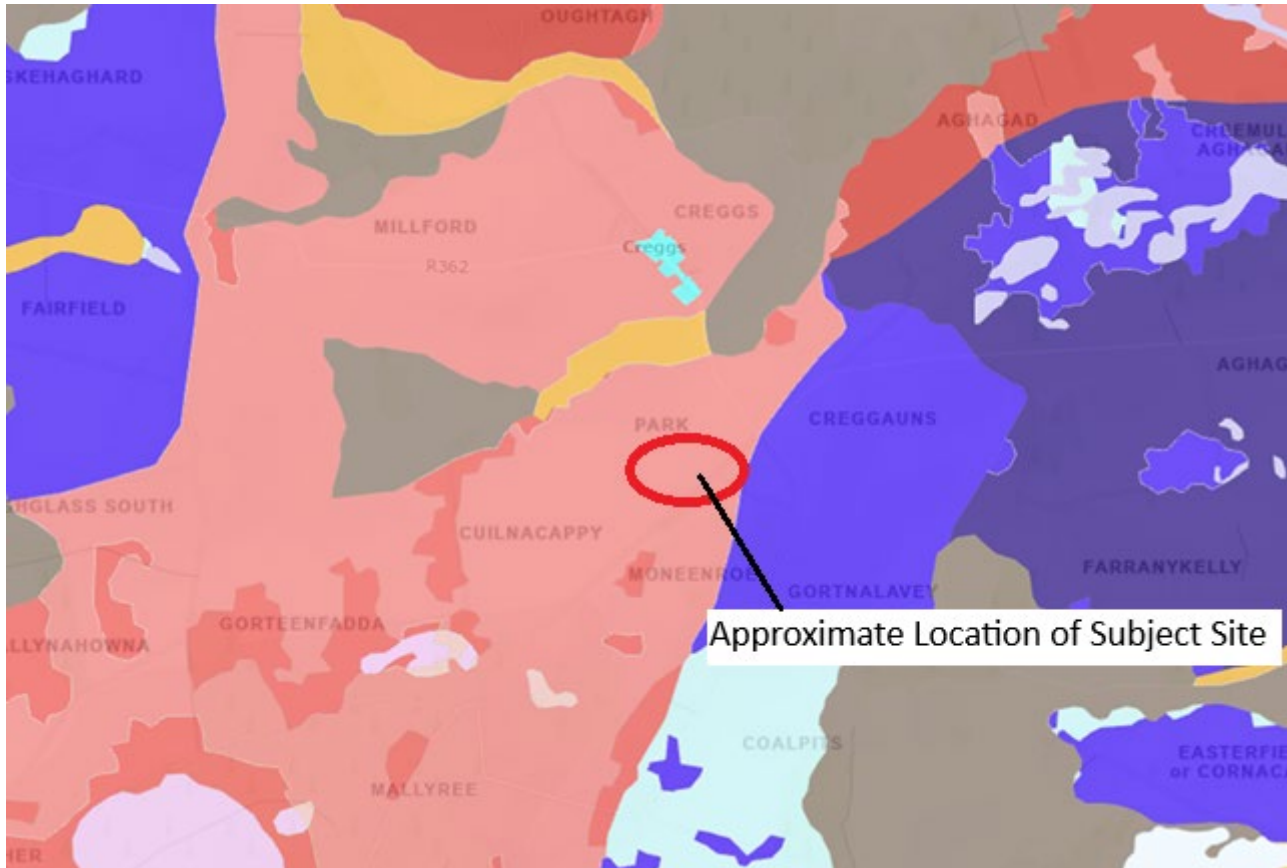


Figure 4-3: Extract from Teagasc Soils Mapping from Geological Survey of Ireland Website

Source: GSI Website ([Geological Survey Ireland Spatial Resources \(arcgis.com\)](https://www.arcgis.com))

4.4.1.2 Land

As set out above the predominant land use in the area is agricultural and is not a particularly sensitive land use type.

The Galway County Development Plan 2022-2028 includes a Landscape Character Assessment of county Galway including the subject site. The site is located within the 'Eastern Plains Landscape Region'. Within this landscape region, the site is within the 'North Galway Complex Landscape' type. This is described as:

"An extensive grassland plain stretching from the Suck River in the east to the watershed of the River Clare in the west. It includes elevated areas such as Slieve Dart in the north, as well as lakes, turloughs, raised bogs, wetlands and winding rivers. Agriculture, scattered forestry and associated field patterns are very mixed and can exhibit large and abrupt changes of character over very short distances, especially in areas around bogs. It has a dense network of smaller settlements and roads, though at a lower density than the southern plains of the county."

The site sensitivity is classed as 'Low (1)', the lowest degree of sensitivity, and defined as having 'low sensitivity to change'. Furthermore, the landscape character types are divided into landscape character units. The site is located entirely within Unit '5a – Suck Valley Unit', described as a '*large area of low-lying farmland between large bogs and wetlands. Sparsely populated, crossed by few roads.*'

4.4.1.3 Water

There are no watercourses within or in immediate proximity to the application site.

The Gortnadeeve East stream (EPA name) is located circa 600 meters to the north and northwest of the substation site. It is a small 1st order stream which flows from west to east along the boundary of the permitted solar farm to the north of the substation site and is part of the Suck subcatchment of the Shannon catchment.

The Gortnalavey Stream is a small 1st order stream located circa 500m to the south of the proposed substation site. It crosses the local road L2316 and heads southwards in a south-east direction for approximately 5.2km before discharging into the River Suck.

The ecological status or potential value of both streams was recorded as 'poor' for the period 2016 – 2021 under the Water Framework Directive.

The site of the proposed substation sits on a locally important aquifer (shown pale green colour on **Figure 4-4**) with extreme vulnerability.

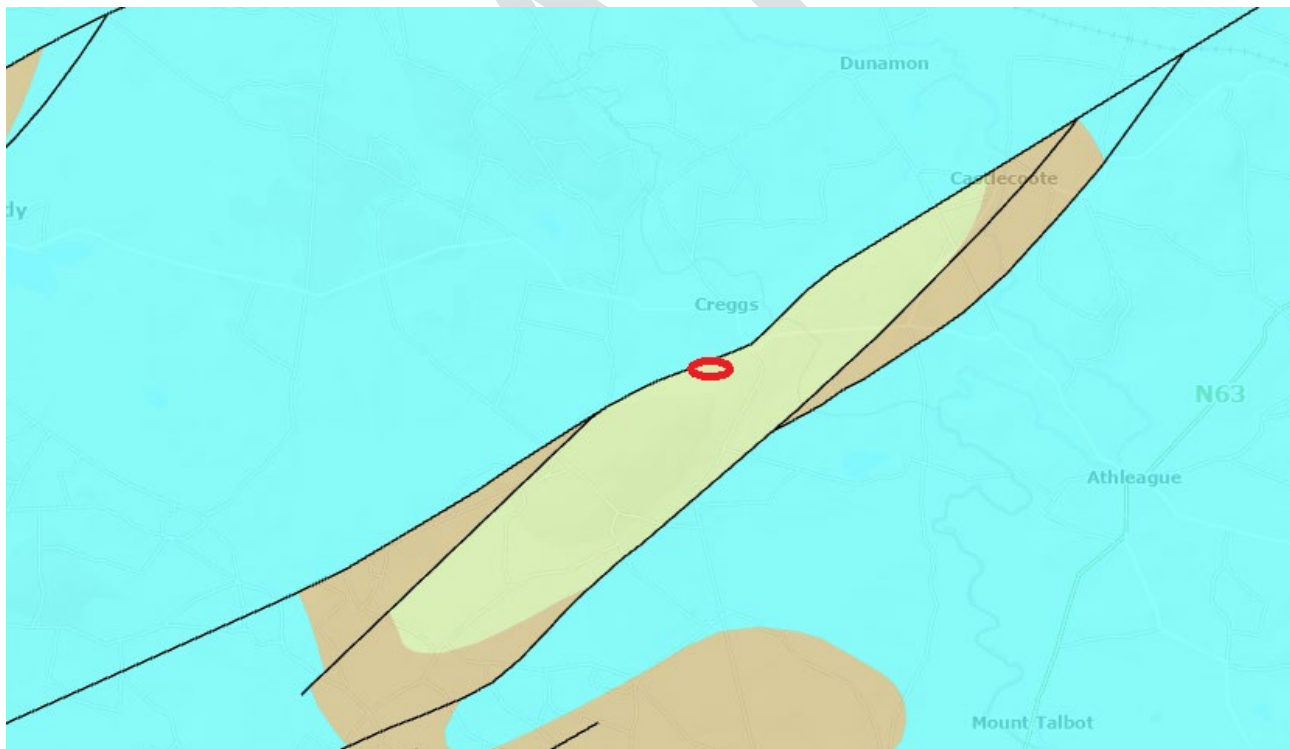


Figure 4-4: Extract from Groundwater Resources (Aquifer) Mapping from Geological Survey of Ireland

Source: [Geological Survey Ireland Spatial Resources](#)

4.4.1.4 Biodiversity

The subject site primarily comprises fields of improved agricultural grassland, which is widespread in the area. A survey undertaken in 2022 noted that this habitat supports a limited range of grasses and a few characteristic forbs. Wetter areas and more species rich pockets are present throughout this habitat and along the margins of fields and grade into adjacent areas of adjacent wet grassland. Species dominant and abundant within this habitat include perennial rye-grass *Lolium perenne*, Yorkshire fog *Holcus lanatus*, red fescue *Festuca rubra*, creeping bent *Agrostis stolonifera*, smooth meadow grass *Poa pratensis*, common couch *Elymus repens*, soft rush *Juncus effusus* and white clover *Trifolium repens*. Some occasional rarer species occur. This habitat is considered to be relatively typical of slightly wetter improved grassland pastures in the wider area and of ecological importance at the site level.

The site also incorporates a number of hedgerows which separate the grassland fields, and have a higher ecological value in the context of the site. Species composition is variable with some hedgerows being species rich and others being comprised solely of hawthorn. The field boundary hedgerow adjacent to the substation boundary is native species poor. In a survey undertaken in 2022 the hedgerows were assessed for bat roost potential. No bat roost potential was identified at that time in the hedgerows within the current proposed application site.

4.5 Absorption Capacity of the Natural Environment

The natural environment of the subject site comprises improved agricultural grassland with no watercourses on or in the immediate vicinity of the site. **Table 4.1** considers potential environmental characteristics (identified in Schedule 7 of the Regulations) which could affect the absorption capacity of the receiving environment. From the detail presented in **Table 4.1**, no particular constraints are identified in respect of the capacity of the environment to be able to absorb the proposed development.

Sensitive Receiving Environment Types (identified in Schedule 7)	Presence at or in Vicinity of Subject Site
Wetlands, Riparian Areas, River Mouths	There are no wetlands, rivers or watercourses within or immediately adjoining the site. The closest watercourses are first order streams approximately 500m – 600m distant from the proposed substation.
Coastal Zones and the Marine Environment	Not applicable - site is c.52km from the coast.
Mountain and Forest Areas	The site and surrounding area is not mountainous. There is no forestry on or adjoining the site. There is some commercial coniferous forestry approximately 700m to the southwest of the substation site. It bounds part of the southern boundary of the permitted solar farm site. This forestry does not present any absorption capacity constraints for the proposed substation and associated infrastructure development.
Nature Reserves and Parks	There are no nature reserves or parks in proximity to the subject site. The closest nature reserve is Richmond Esker Reserve approximately 18km away.
Areas Classified or Protected Under Legislation	The site of the proposed development is not located within the boundary of any designated / protected sites of

Sensitive Receiving Environment Types (identified in Schedule 7)	Presence at or in Vicinity of Subject Site
	international, national or local nature conservation importance. The closest designated Natura 2000 sites are the River Suck Callows SPA approx. 3.4km to the east and southeast and the Aughrim (Aghrane) Bog SAC approx. 3.4 km to the south. There are a number of other Bog and Turlough SACs within 15km of the subject site. The closest NHAs are the River Suck Callows NHA approx. 3.4km to the east / south east and the Aughrim Bog NHA approximately 3km to the south Figure 4.5 shows the subject site and all Natura 2000 sites within a 15km radius, while Figure 4.6 shows all NHAs / pNHAs within a 15km radius.
Areas which have failed to meet European environmental standards	No breaches of European environmental standards have been identified at the subject site or surrounding context.
Densely Populated Areas	The closest settlement to the subject site is Creggs village approximately 1.2km away. There is dispersed one-off housing units in the general rural area surrounding the site. Creggs House is the closest residence to the proposed development.
Landscapes and Sites of Historical, Cultural or Archaeological Significance	Creggs House and associated farm buildings are included on the GCC Record of Protected Structures (RPS) (Ref. No. 30402005). There are no sites or monuments under Preservation Order and no National Monuments in state care or ownership and guardianship of the Minister for Housing, Local Government and Heritage, within the proposed development site boundary or within a 1km study area around the proposed development site. There are no recorded archaeological sites within the proposed development site area. The closest features are recorded ringfort sites, GA020-019 in the field immediately to the northeast of the proposed substation (approx. 150m from the site boundary) and GA020-005 in the field immediately to the northwest of the proposed substation (approx. 200m from the site boundary). The Zone of Notification for the first Ringfort extends into the field of the proposed substation but does not overlap with any proposed works. A buffer zone around the second ringfort was provided for in the solar farm application within which no development will occur. Also, in the field to the north of the substation but to the north of the 110kV Cloon to Lanesborough line is a disused quarry pit site (GA020-020).

110kV Substation and Grid Connection – Creggs Solar Farm

Sensitive Receiving Environment Types (identified in Schedule 7)	Presence at or in Vicinity of Subject Site
	There is a total of 9 recorded sites located within 1km of the proposed development. These comprise of ringforts, quarry pits and an enclosure and are shown on Figure 4.7 .

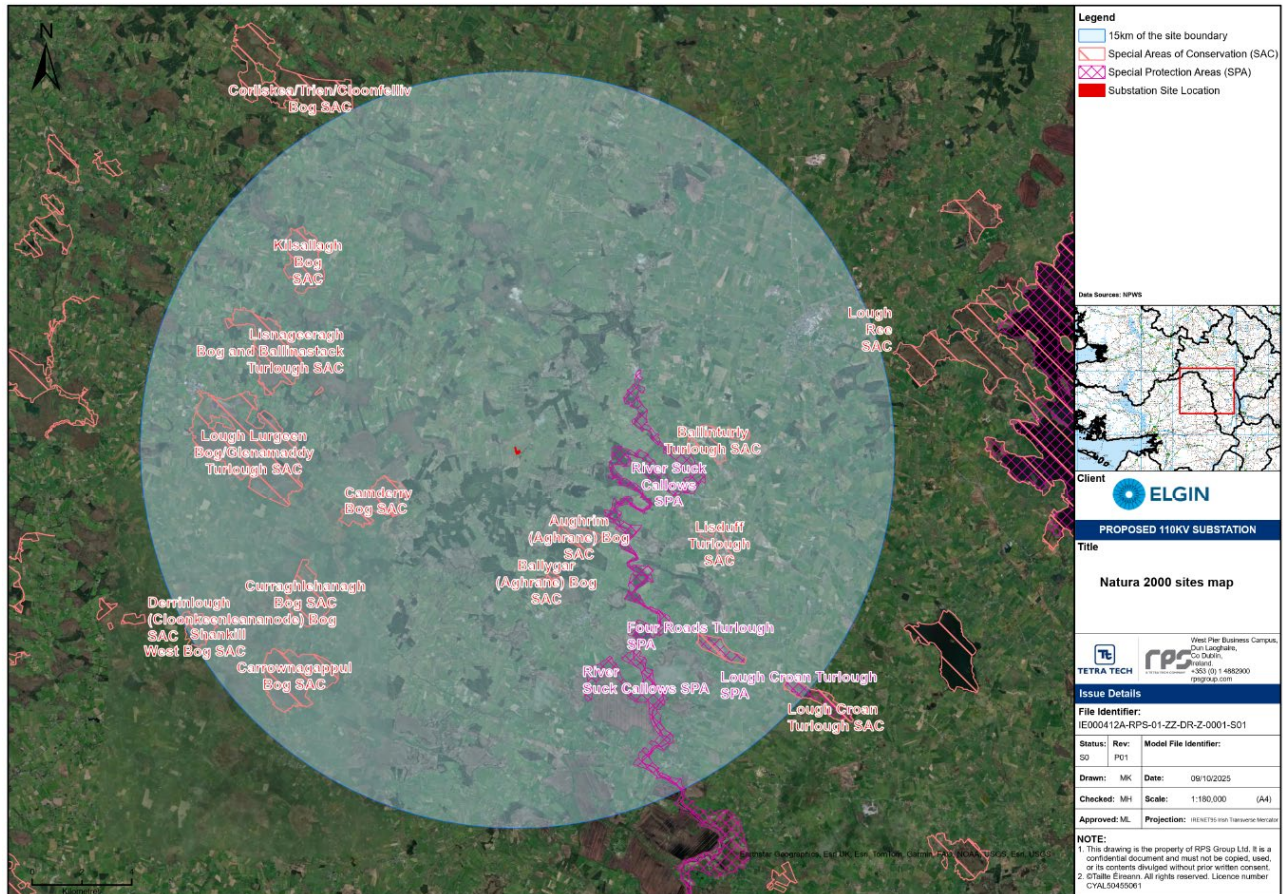


Figure 4-5: Natura 2000 Sites within 15km of the Subject Site

110kV Substation and Grid Connection – Creggs Solar Farm

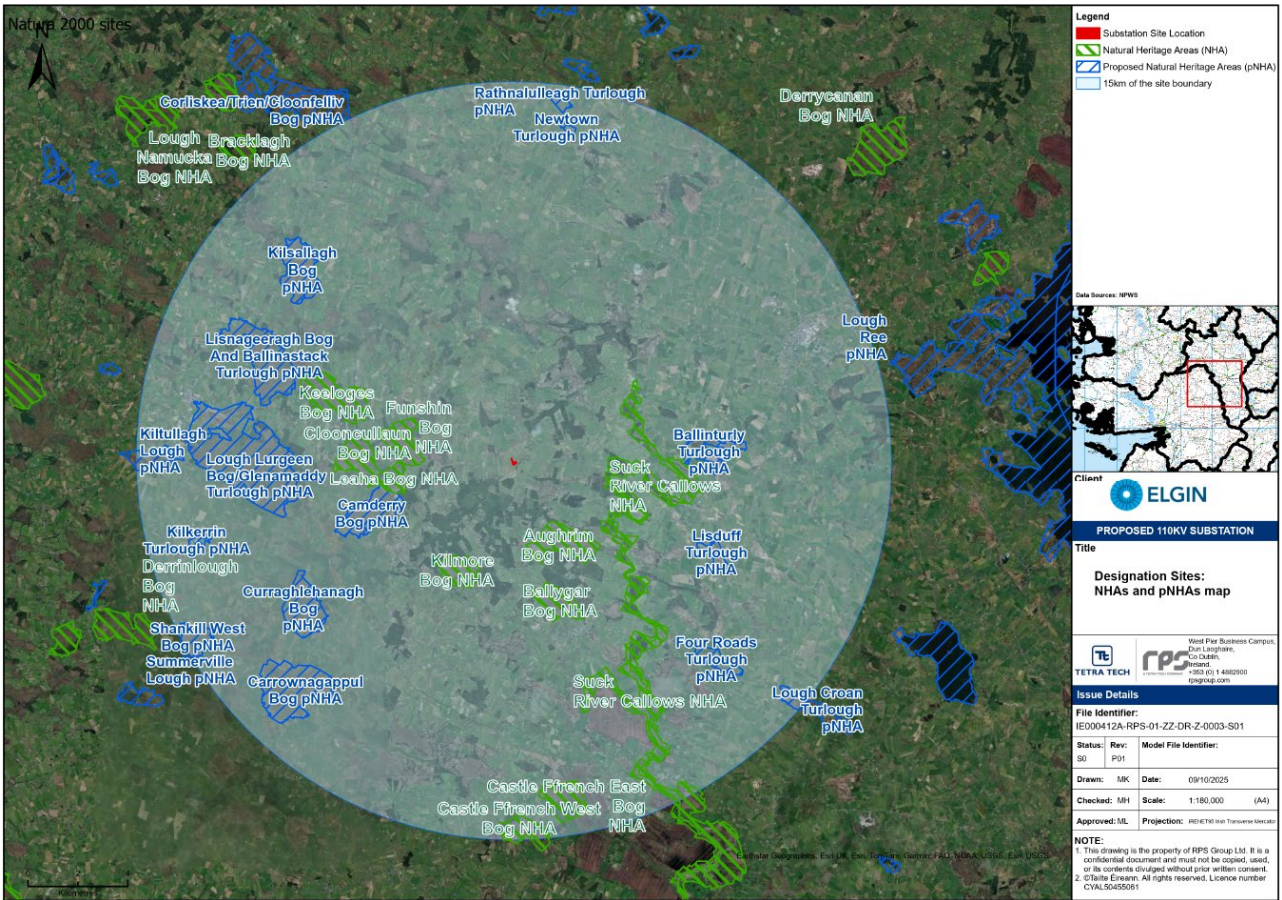


Figure 4-6: Natural Heritage Areas and Proposed Natural Heritage Areas within 15km of the Subject Site

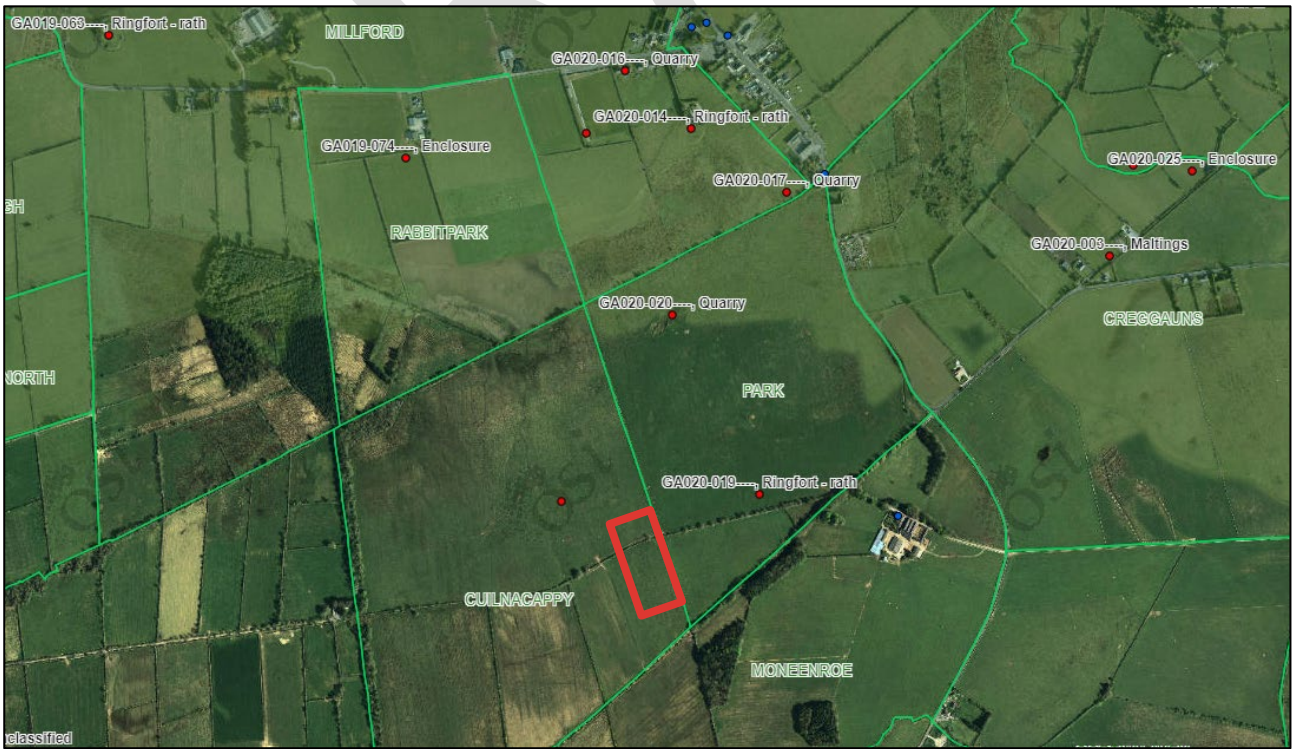


Figure 4-7: Sites and Monuments Record within 1km of the Subject Site (Red box shows indicative site location)

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5.0 Types and Characteristics of Potential Impacts

This section sets out the types and characteristics of the likely effects of the proposed development on various environmental factors having regard to the characteristics of the proposed development as identified in **Section 3** and its location and environmental sensitivities as set out in **Section 4**. The environmental factors considered are those specified in paragraph (b)(i)(I) to (V) of section 171A of the Planning and Development Act 2000 as amended as follows:

- Population and Human Health;
- Biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive;
- Land and Soil;
- Water;
- Air and Climate;
- Material Assets;
- Cultural Heritage;
- the Landscape; and
- the interaction between the factors above

The description of the likely significant effects takes into account the following criteria of Item 3 of Schedule 7 as appropriate:

- The nature of the impact
- The magnitude and spatial extent of the impact
- The probability of the impact
- The expected onset, duration, frequency and reversibility of the impact
- The intensity and complexity of the impact;
- The potential for cumulation of the impact of other existing or permitted development; and
- The possibility of effectively reducing / mitigating the impact

5.1 Population and Human Health

5.1.1 Consideration of Potential Impacts

5.1.1.1 Construction Phase

The effects on Population and Human Health during the construction phase are projected to be temporary and slight positive. The construction of the permitted solar farm and the proposed substation and associated grid connection infrastructure will take place in tandem and is expected to take approximately 4 to 6 months. An average construction workforce of 80 - 100 persons is anticipated. This may increase to over 100 persons during the peak periods.

The majority of the workforce will likely travel into the area for the short duration of the works, but there may be some temporary employment opportunities filled by local construction workers within the general area. This would be a short term, temporary, slight positive impact.

While much of the technical plant and equipment will be sourced from specialist suppliers, some materials required for civils works will likely be sourced more locally which will benefit local suppliers. This would be a short term slight positive impact.

The workforce will generate demand for some local services in particular the hospitality sector. While this will be a positive impact, given the relatively short duration of the works this is considered a minor local positive impact of a temporary to short term nature.

As with any construction site there is potential for negative impact on workers due to accidents. Best practice and implementation of a Health and Safety Plan however will be required to ensure no risks to the population working on the site or working adjacent to the site during construction.

The construction phase will increase traffic on the local road network. This will comprise construction deliveries and construction staff traffic. Workers will generally travel to the site via minibus from local accommodation, which would minimise the number of trips generated to and from the site. Increased traffic on the local road network may cause minor inconvenience to local road users. This impact however is considered to be slight and short term only.

During the construction phase, there would also be potential for impacts relating to dust generation, and noise and vibration from construction activities that could potentially have a negative impact on the local population. However, the site of the construction works is not immediately proximate to any sensitive residential receptors. The closest residential property is Creggs House which is c.500m approx. from the site of the proposed substation construction works. Furthermore, best practice construction management measures will be set out in a Construction Environmental Management Plan (CEMP) and a Construction Traffic Management Plan (CTMP) which will manage and minimise potential, noise, vibration and dust emissions which will minimise impact on the local population and risks to human health of the on-site workers. Overall, such impacts will be slight, temporary and will have a very limited area of potential impact.

5.1.1.2 Operational Phase

The potential for impacts of the proposed development on population and human health during the operational phase is limited.

The operation of the substation does not require permanent on-site personnel. The substation will be operated remotely and will require occasional operational and maintenance visits. Accordingly, there will be minimal increase in vehicular movements to the site and no associated increase in noise, dust or emissions. Potential for traffic related impacts on the local population therefore is imperceptible. Furthermore it is noted that the permitted solar farm development will also have only infrequent maintenance requirements, (typically one person in a van each month), such that the cumulative potential for traffic generation during the operational phase remains imperceptible.

Some of the plant (e.g. transformers) within the substation will have potential to generate some noise. However, there are no sensitive receptors existing in the immediate vicinity of the proposed substation that could potentially be affected. The closest residence, Creggs House, is c.500m away from the proposed substation. Furthermore, noise barriers can be provided within a substation to block noise emissions in the event that there are nearby receptors. The potential for impact is considered permanent and negative but of very slight to imperceptible significance and limited area of potential impact.

The other area of potential indirect impact of the proposed development on population is visual impact. As set out below in **Section 5.8** potential landscape and visual impacts are considered to be slight to moderate. Given the limited number of residential receptors the overall impact on the local population is considered slight negative.

Overall, during the operational phase, the effects on Population and Human Health are projected to be imperceptible.

5.1.2 Summary Finding of Likely Significant Impacts

There are no likely significant impacts on population and human health identified. There will be a slight positive short term impact for local businesses during construction phase. No notable impacts on population are predicted for the operational phase.

5.2 Biodiversity

5.2.1 Consideration of Potential Impacts

5.2.1.1 Construction Phase

The construction of the substation and associated grid connection infrastructure will require the clearance of vegetation from the existing agricultural fields. As set out in **Section 4.4.1.4**, the ecological value of the site is limited to local value. The habitats and species affected are not species rich and are widespread in the area. There will be no loss of sensitive ecological habitat as a result of this development. The expected impact on flora on the site due to construction is considered to be permanent, negative and moderate at a local level.

The construction phase of the development does have the potential to cause a disturbance to fauna at the site and in the surrounding area, as a result of an increase of human activity on the site and resulting increase in noise on the site. It is anticipated that mobile species, such as mammals and birds, will temporarily leave the vicinity of the site during construction works. From surveys undertaken in 2022 however no protected mammals were identified as present on the site. No evidence of badger setts and no bat roost potential was identified at the site. Even in the event that protected species were identified on the site it would be possible to put in place mitigation to appropriately amend the project design or relocate the mammals. Overall, the impact on fauna at the site during construction is considered to be temporary, slight and negative, extending to the combined area of the proposed development and the permitted solar farm development.

As noted in **Section 4.4.2**, the proposed substation is not within a European site (SAC or SPA). The closest European Natura 2000 sites are the River Suck Callows SPA approx. 3.4km to the east and southeast and the Aughrim (Aghrane) Bog SAC approx. 3.4 km to the south.

The qualifying interests of the River Suck Callows SPA are Whooper Swan, Golden Plover, Lapwing, Greenland White-fronted Goose, Wigeon and Wetland and Waterbirds. During a survey undertaken in 2022 the application site was recorded to support a range of relatively common and widespread bird species. It did not include any of the QI of the River Suck Callows SPA and no breeding waders. The density of grazing animals on the site in addition to the general composition of the habitats and the presence of woodland and mature trees in the vicinity was considered likely to significantly restrict its suitability for breeding waders / waterbirds. It is also noted that the application site is not hydrologically connected to the SPA, such that it does not have potential for indirect adverse impacts by reason of sedimentation or pollution. For these reasons, the proposed substation and associated infrastructure therefore is considered to not have potential for impact on the River Such Callows SPA.

The qualifying interest of the Aughrim Bog (Aghrane) Bog SAC is degraded raised bogs still capable of natural regeneration, with a conservation objective seeking to restore the favourable conservation condition of the bog. It is noted that this habitat and the achievement of the conservation objective is reliant on hydrological and hydrogeological factors amongst others. There are no watercourses on or close to the proposed application. It is not hydrologically connected to the Aughrim Bog (Aghrane) Bog SAC. The application site is also not hydrogeologically connected to the SAC. As noted in **Section 4.4.1.3** the proposed substation is on a locally important aquifer. The SAC is on a separate regionally important aquifer

to the south. The proposed substation and associated infrastructure therefore is considered unlikely to have potential for impact on the Aughrim Bog (Aghrane) Bog SAC.

Due to the separation of the application site from other Natura 2000 sites, the lack of hydrological and hydrogeological connection and the limited extent of excavation work required for the proposed development no potential for likely impact on any other Natura 2000 sites is identified.

Overall, the impacts on Biodiversity during the construction phase of the development are estimated to be slight, negative and local.

5.2.1.2 Operational Phase

The localised impacts on loss of habitats which will have occurred at construction stage will be permanent and continue through the operational phase.

The presence and ongoing operation of the substation and associated grid connection infrastructure has little potential for further impact on biodiversity during the operational phase. The substation has potential for generating noise which could cause some localised disturbance to mammal species. Similarly, lighting of the site at night could potentially impact mammals also. No protected mammals were recorded at the site however during a 2022 survey. Furthermore, noise attenuation can be put in place within the substation site if necessary, and lighting will only be turned on infrequently if necessary for maintenance. Overall, potential for impact on biodiversity due to noise or lighting in the operational phase is considered negligible to slight negative only at a local level.

5.2.2 Summary Finding of Likely Significant Impacts

No likely significant impacts on biodiversity are identified. Some slight negative local level impacts are identified in the construction phase due to direct impact on habitats and temporary disturbance to mammals in the vicinity of the site. No notable impacts are identified during the operational phase. No potential for impacts on any Natura 2000 sites are identified at construction or operation stage.

5.3 Land and Soils

5.3.1 Consideration of Potential Impacts

5.3.1.1 Construction Phase

The proposed development is located on lands that are currently in agricultural use. The site of the proposed substation will be permanently lost to agricultural use. Given the relatively modest extent of land involved however and the extent of comparable land in the surrounding vicinity, the impact is not considered significant. It is considered to be a slight negative permanent impact at a local level.

During the construction phase accidental spillages of fuel could arise which could impact on soils. Spillages directly from plant would have restricted potential impact based on the limited volume of fuel carried in individual plant or machinery. Larger volumes of fuel, if being stored on site, will be in bunded areas. Standard construction management measures will also include the provision of spill kits on site for use in the case of accidental spillages to minimise impact on soils or hydrogeology. Overall, the impact due to potential spillages is considered to be slight negative with a small magnitude of impact and of short term duration.

During the construction of the substation, it is possible that excavation and stockpiling of soils could lead to soil erosion. Soil compaction could also arise due to traffic and storage of excessively high stockpiles of soil, and silt laden run off in heavy rain or wheel-washing activities. Best practice standard construction management measures however, combined with the modest extent of excavation works required for the

development in the first instance, will avoid the generation of large stockpiles on site and the overuse of specific areas of land. Overall, this impact is considered slight, negative and short term.

5.3.1.2 Operational Phase

The operational phase of the substation and associated infrastructure does not have potential for notable impacts on land or soils. Once constructed and operational, the land use will be altered permanently or for a very long duration as the substation will remain in situ even after the decommissioning of the solar farm development. Thus, there will be no changes to land use during operation.

There will be an auxiliary diesel generator power supply on site during the operational stage with associated diesel tank. This has potential to impact on soils due to accidental spillage. This potential can readily be mitigated with the provision of a bund at the diesel storage area and the provision of spill kits at the site. Overall, this impact is considered to be a slight, negative permanent impact but of short term duration in the event that it arises.

5.3.2 Summary Finding of Likely Significant Impacts

Some slight negative short term impacts on land and soils are identified during the construction and operational phases due to potential pollution.

5.4 Water

5.4.1 Consideration of Potential Impacts

5.4.1.1 Construction Phase

Construction works by their nature have the potential for impact on the water quality of watercourses and groundwater by way of pollution and sedimentation due to accidental spills and runoff during periods of heavy rainfall. As set out in **Section 5.3.1.1** however, risk of pollution to ground and groundwater can be readily mitigated by construction management measures on site.

Given the significant separation distances between the proposed development and the nearest watercourses (the closest as identified in **section 4.4.1.3** is approximately 500m away) across green fields, it is considered that the potential for sedimentation of watercourses from construction of the proposed development will be imperceptible.

5.4.1.2 Operational Phase

When operational the substation and associated infrastructure has very little potential for interaction with the water environment. There are no proximate watercourses. The only potential for impact identified relates to impact on groundwater due to pollution. As set out in **Section 5.3.1.2** however, the only potential source of pollution during the operational phase would be fuel stored for the purposes of an auxiliary generator. Risk of spillage would be mitigated through the use of a bund and the keeping of on-site spill kits. The resulting potential for residual impact on groundwater is considered to be slight, negative and temporary.

5.4.2 Summary Finding of Likely Significant Impacts

Slight, negative impacts on ground water could potentially arise due to the proposed development during construction and operation. Given the separation distances from the proposed development to watercourses the potential for impact on hydrology is imperceptible during construction and operation.

5.5 Air and Climate

5.5.1 Consideration of Potential Impacts

5.5.1.1 Construction Phase

Noise and Vibration

In terms of noise, the construction phase may lead to temporary increase in background noise levels through the operation of plant machinery. The closest potentially sensitive receptor is the residential use at Creggs House. There are no other sensitive receptors in close proximity. Potential for adverse noise impacts will be mitigated by restrictions on construction hours such that they do not overlap with hours when residents would typically be sleeping, or evening time hours. Furthermore, the nature of the construction works are not likely to give rise to very high noise levels (e.g., no pile driving is required). Finally, the works area is well separated from Creggs house such that potential noise or vibration impacts would be minimised.

It is considered that the potential residual noise impacts will not give rise to significant nuisance or inconvenience. Overall, it is considered that construction related noise will be slight negative, temporary and short term in nature.

Air Quality and Climate

During construction there may be adverse impacts on air quality due to emissions and dust generation during the following site preparation and construction works:

- Land clearing and demolition;
- Earthwork operations;
- Equipment movements;
- Vehicular transport;
- Building activities (i.e., concrete, mortar and plaster mixing, drilling, milling, cutting, grinding activities); and
- Windblown dust from temporary unpaved roads and bare construction sites.

Dust generation can be mitigated through a variety of best construction practices including amongst others programming of potential dust generating activities with reference to weather forecasts, organising volumes and nature of soil storage, dampening down of dry / dusty surfaces etc. Furthermore, potential receptors are limited to the residents and farm workers associated with Creggs House and farm and the on-site construction workers for the solar farm and substation. Following the implementation of such measures, it is considered that residual negative effects of the proposed development on air quality due to dust generation will be slight to imperceptible negative and short term.

Other potential climatic impacts identified are minor emissions of greenhouse gases (GHG) to the atmosphere from worker travel and transport of materials. Best practice construction management measures including the following will minimise the potential for such emissions:

- Specification of locally sourced materials with lower embodied carbon content where feasible, in line with circular economy principles;
- Turning off machinery engines when not in use;
- Ensuring regular maintenance of construction machinery;
- Handling materials efficiently on site to minimise the waiting time for loading and unloading, thereby reducing potential emissions;

- A requirement for the Contractor to implement an Energy Management System for the duration of the works;
- Substation to be constructed at a level above any potential flooding;
- Substation equipment (e.g. cables) to be specified for use in higher temperatures projected in the future.

The residual air emission effects of the proposed development are likely to be imperceptible to slight short term negative.

5.5.1.2 Operational Phase

Noise and Vibration

Some of the plant (e.g. transformers) within the substation will have potential to generate some noise. However, there are no sensitive receptors existing in the immediate vicinity of the proposed substation that could potentially be affected. The closest residence, Creggs House, is c.500m away from the proposed substation. Furthermore, noise barriers can be provided within a substation to block noise emissions in the event that there are nearby receptors. The potential for impact is considered permanent and negative but imperceptible intensity and limited area of potential impact.

Air Quality and Climate

Once operational, the substation and associated overhead transmission lines will not generate any greenhouse gas emissions. The only potential emissions associated with the development during the operational phase relate to vehicles accessing the site for maintenance purposes. This level of activity is not expected to cause any notable impacts on air quality.

Once operational the proposed substation and associated infrastructure will provide a grid connection for the permitted renewable solar energy project. The enabling of this renewable energy project will have a moderate positive effect on climate change.

5.5.2 Summary Finding of Likely Significant Impacts

Noise and Vibration

There are no likely significant impacts on noise and vibration identified either positive or negative.

Air Quality and Climate

The construction phase has potential to generate dust which can affect air quality, but this can be readily mitigated through site management measures. The development has potential to generate small amounts of GHGs primarily during the construction stage, but much of this can be minimised through good site construction practices. Overall, the development will facilitate the transfer of renewable energy generated at the permitted solar farm onto the grid which will have an overall positive impact on climate.

5.6 Material Assets

5.6.1 Consideration of Potential Impacts

5.6.1.1 Construction Phase

The only identified material assets at the application site is the existing 110kV overhead transmission into which grid connection is proposed to be made.

The nature of the proposed connection will allow the majority of the connection works (the new towers and overhead lines from the substation to the new towers) to be undertaken independent of impact on the

existing transmission line. There will be a short period in which the existing circuit will be inactive so that the break into the existing line can be made with the new loop in loop out. This will have a short term negative impact.

Given the rural location it is not expected that there are any other existing onsite services or utilities that could potentially be impacted. In any event, if there were, should service suspensions be required during the construction phase, reasonable prior notice would be given to any residences and commercial premises affected, and disruptions planned to minimise the duration of outages. No such impacts, however, are considered likely.

The construction of the substation will result in increased traffic flow on the local road network. It is currently estimated that the construction phase of the substation combined with the permitted solar farm will generate approximately 1,020 no. additional HGV trips in total over the duration of construction which will be 4 – 6 months. Based on a short construction period of approx. 4 months (16 weeks), this would give rise to an average daily increase in HGV trips per day of 13 and the maximum no. of additional trips per day is estimated to be 16.

An average workforce of 80 - 100 persons is currently anticipated. This may increase to over 100 persons during peak periods. Workers will generally travel to the site via minibus from local accommodation. Average minibus occupancy of 8 persons is expected to generate no more than 12 no. two way trips per average working day, which would rise marginally during peak construction periods.

The combined HGV (13) and LGV (24) average daily increase would be 37 no trips per day. This level of traffic can be accommodated on the local road network without giving rise to significant adverse impacts in terms of traffic delays or queuing etc. There may be some minor inconveniences caused.

5.6.1.2 Operational Phase

The provision of the new substation itself will enhance the transmission network in the area. This substation will have the ability to serve other transmission lines in the future if required. This will be a permanent moderate positive impact on the transmission network.

5.6.2 Summary Finding of Likely Significant Impacts

Other than short term disruption to the existing 110kV transmission line during construction to facilitate the making of the connection to the new substation, the proposed development will have no impact on material assets during construction. The addition of a new 110kV substation to the transmission network in this area will be a permanent moderate positive impact.

5.7 Cultural Heritage

5.7.1 Consideration of Potential Impacts

5.7.1.1 Construction Phase

There are no recorded archaeological sites (as recorded by the Archaeological Survey of Ireland (ASI)) located within the boundary of the application site. As set out in **Section 4.4.2** however, there are a number of known archaeological sites in the vicinity of the application site. If present such unknown sites could be adversely impacted by excavation and soil stripping works associated with the development. Applying similar mitigation as applied to the permitted solar farm development however, comprising geophysical survey, possible testing, monitoring of ground works, and appropriate recording of any features revealed, will protect against adverse impacts. Overall, significant adverse impacts are not considered likely.

5.7.1.2 Operational Phase

Any potential for impact on archaeology will arise from construction works. The operation of the substation development and associated infrastructure is not identified as having any potential for impact on archaeology.

Creggs House and outbuildings is a protected structure. While the substation will introduce a new physical feature into the local landscape, it is not situated within the curtilage of or within any significant views of Creggs Houses. Accordingly, it is not considered to have a likely significant impact on the setting of the house.

No other potential for impact on cultural heritage is identified.

5.7.2 Summary Finding of Likely Significant Impacts

There are no likely significant impacts from the proposed development identified from the construction or operation of the development.

5.8 Landscape

5.8.1 Consideration of Potential Impacts

5.8.1.1 Construction Phase

The construction activity associated with the substation will largely be hidden from view from local roads and the closest residential properties, with minimal potential for impact. There will be some slight negative impact on the landscape due to the presence of construction traffic, plant and activity but this will be at a very local level only and will be short term and temporary.

5.8.1.2 Operational Phase

As set out in **Section 4.4.1.2**, the local landscape of the application site has a low sensitivity rating according to the landscape character assessment set out in the Galway County Development Plan 2022 – 2028. The landscape is dominated by large areas of low-lying farmland between large bogs and wetlands and is relatively sparsely populated and crossed by few roads. Given the topography and elevation of the site and surrounds, the potential extent of visibility of the site will be limited. Furthermore, there are few potentially sensitive receptors located nearby and finally the existing landscape is of low sensitivity such that it has potential to accommodate some change. Overall, the impact on landscape is considered to be slight to moderate negative at a local level, with effects arising limited in both scale and extent.

5.8.2 Summary Finding of Likely Significant Impacts

There are no likely significant impacts identified either positive or negative.

5.9 Interaction Between the Factors Above

From the foregoing, some local, short term, imperceptible, slight and moderate impacts may potentially arise primarily during the construction phase but with some during the operational phase also identified. While some of these impacts have potential to interact (e.g. noise, dust and traffic impacts may impact on the local population), no interactions are identified which are likely to result in significant impacts.

No significant interaction of impacts is identified during the operational stage.

5.10 Cumulative Impacts

As set out in **Section 3.2** the main project identified that could have cumulative impacts with the proposed development is the permitted solar farm development which the substation will service. The main areas of potential cumulative impact of the solar farm development with the proposed substation relate to increased traffic volumes utilising the same site access and local road network, increased potential for air emissions during construction and the long term combined landscape and visual impact. It is noted that the potential impacts of both the solar farm development and the substation individually are not deemed likely to have significant impacts on the environmental topics. While the cumulative impacts will be slightly increased, they will still be subject of mitigation and restricted potential impact in the first instance such that significant cumulative impacts are not considered likely.



6.0 Conclusion

It has been assessed that the proposed development does not fall within any of the classes of development for a mandatory EIA as set out within Schedule 5 Part 1 and Part 2 of the Planning and Development Regulations. The overhead 110kV loop in loop out connection part of the development does fall within a class of development set out in Schedule 5 Part 2 but it does not meet the specified threshold.

An assessment was therefore undertaken of whether the development would or would not be likely to have significant effects on the environment by addressing the criteria and information set out in Schedule 7 and 7A of the Planning and Development Regulations 2001 (as amended).

This assessment concluded that no significant effects on the environment are considered likely to arise. On this basis it is considered that the development does not require Environmental Impact Assessment and that an EIAR is not necessary.

The main reasons for this conclusion are:

- We have considered whether the scheme is likely to have significant effects on the environmental factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act.
- This consideration has had regard to the existing context and condition of the area of the proposed development and its surrounding context. It has considered the impacts of the scheme and the likely resulting effects on the environment.
- In assessing likely impacts, we have considered mitigation measures that can be applied to minimise or eliminate likely effects on the environment as relevant and appropriate. No mitigation measures to protect qualifying interests of any Natura 2000 sites were considered.
- The assessment has identified likely slight and moderate residual effects on various environmental factors.
- No likely significant residual effects on any of the environmental factors screened were identified.

Appendix A: Planning History Search

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Planning History Search

A desktop search of proposed and existing planning application was carried out in **July 2026**. The search used publicly available data from Galway County Council planning enquiry system, Roscommon County Council planning enquiry system, MyPlan.ie, An Bord Pleanála, and Department of Housing, Planning and Local Government Environmental Impact Assessment (EIA) Portal.

This search was conducted using an approximate centre point for the substation site. A radius was created around this centre point that stretched 5 kilometres in distance. In order to make the data more accessible and easier to interpret, planning applications for works that are considered ‘minor’ in nature were excluded from the results included below. The scale of works that were considered minor include extensions to dwellings, applications for agricultural sheds, and entrances to properties. Additionally, applications that were withdrawn by the Applicant, or refused planning permission by the relevant authority were excluded from the search.

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110kV Substation and Grid Connection – Creggs Solar Farm

Planning Authority	Development Description	Distance to Proposed Development	Grant Date	Development Status
Galway County Council Reg. Ref. 20/1155	Permission was granted to Aidan Farrell on the grounds of Creggs R.F.C club at the Green, Creggs, for construction of a sports complex building, comprising of a gymnasium, dressing rooms, club rooms, toilet facilities, and ancillary development with proprietary sewerage treatment plant and percolation area. Retention permission was also granted an existing astro turf playing pitch, spectator stand flood lighting.	1.03km	08.01.2021	Complete
Galway County Council Reg. Ref. 21180	Ontower Ireland Limited was granted retention permission at Gorteenfadda for a telecommunications support structure with associated equipment and cabinets within a fenced compound.	1.65km	09.04.2021	Complete
Galway County Council Reg. Ref. 2360544	Creggs GAA was granted permission for a spectator stand including disabled toilets, tea room, and community room beneath the stand.	0.76km	17.07.2023	Not commenced
Galway County Council Reg. Ref. 2360875	Elgin Energy Services Limited was granted a 10 year planning permission for a solar PV farm with an operational lifespan of 40 years and a maximum export capacity of 75MW.	0.20km	08.02.2024	Not commenced
Galway County Council Reg. Ref. 2460637	Creggs National School Board of Management was granted permission for construction of a connecting single-storey school extension containing 2 no. classroom SEN base, 1 no. central activities space and ancillary educational areas and circulation spaces. .	670m	07.01.2025	Not commenced
Roscommon County Council Reg. Ref. 18/320 An Bord Pleanála Reg. Ref. 302597	EirGrid plc was granted permission by An Bord Pleanála for refurbishment of the existing Cloon to Lanesborough 110kV overhead line which is approximately 65km in extent.	0m	19.03.2019	Complete