hw planning

# Environmental Impact Assessment Screening

Proposed Substation and Grid Connection at Ballyloo, Castletown, Graiguenaspiddoge, Kellistown East, Kellistown West, Kilballyhue, Knockbower, Leagh Or Ballybeg, Linkardstown and Moyle Big (townlands), County Carlow

**Client:** Ballyloo Solar Farm Limited

November 2025

Connecting people.

Connecting places.

# Contents

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# Introduction

## 1.1 Purpose of Statement

This Environmental Impact Assessment Screening has been prepared by HW Planning on behalf of Ballyloo Solar Farm Limited. It accompanies a planning application for the development of a proposed substation and associated underground cabling grid connection cable to connect into the existing 220 /110kV Kellis substation, at Ballyloo, Castletown, Graiguenaspiddoge, Kellistown East, Kellistown West, Kilballyhue, Knockbower, Leagh Or Ballybeg, Linkardstown and Moyle Big (townlands), County Carlow. A full description of the proposed development is contained in Section 2 of this report.

## 1.2 Application Context

The purpose of the proposed development is to transport the electricity generated at the permitted Ballyloo and Park Solar Farms, and the proposed Ballybannon Solar Farms to the national electricity grid via the existing 220/110kV Kellis substation. The planning status of those solar farms is set out below:

- An application for the Ballyloo Solar Farm was made to Carlow County Council on the 28th February 2024 (Council Reference: 24/60043). The Council issued a Notification of Decision to Refuse Permission on the 25th March 2025 and a First Party Appeal was submitted by the Applicant to An Coimisiún Pleanála on the 22nd April 2025. Permission was granted by An Coimisiún Pleanála on the 5th September.
- An application for the Park Solar Farm was made to Carlow County Council on the 19th July 2024 (Council Reference: 24/60205). The Council issued granted permission on the 24th April 2025.
- An application for the Ballybannon Solar Farm was made to Carlow County Council on the 22nd May 2025 (Council Reference: 25/60137). The Council issued a Notification to Grant Planning Permission on the 31st October 2025[1].

Early in the project development phase, it was identified that the proposed substation and grid connection may constitute 'strategic infrastructure development' having regard to the provisions of the Planning and Development (Strategic Infrastructure) Act 2006 and established case precedent on such matters. The Act provides that applications for permission/approval for specified private and public strategic infrastructure developments be made directly to An Coimisiún Pleanála. The applicant entered into pre-application consultations with An Coimisiún Pleanála on the 10th February 2025, with a meeting held on 31st March 2025. An Coimisiún confirmed their opinion that the proposed development meets the definition of 'strategic infrastructure development' as defined

[1] The decision of the Council is still within the statutory appeal period.

in the legislation by means of a formal notice dated 22nd July 2025[2]. The subject application is made pursuant to this determination.

In addition to the above pre-application consultation, the applicant also requested a meeting under section 182F of the Planning and Development Act 2000, as amended, to determine An Coimisiún Pleanála's opinion as to flexibility with regard to the proposed development. The applicant proposed design flexibility for the following development:

01 The substation will be either 110kV or 220kV voltage. The 110kV substation will use Air Insulated Switchgear (AIS) switchgear, whilst the 220kV substation might use AIS or Gas Insulated Switchgear (GIS) depending on the requirements of EirGrid.

02 The underground cable grid connection from the proposed substation to the existing 110/220kV Kellis substation will be at either 110kV or 220kV voltage.

03 The underground cable grid connection is located primarily in the public road network. However, there are two options proposed for its final entry into the existing 220/110kV Kellis substation.

a. Option A is to leave the L30535 local road and enter onto private lands where it will cross agricultural farmland into the existing 220/110kV Kellis substation.

b. Option B is to be situated within the L30535 local road which provides road access into the existing 220/110kV Kellis substation.

It should be noted that the options described above apply to both the 110kV and 220kV underground grid connection cables.

An Coimisiún Pleanála confirmed that the above referred design flexibility can be facilitated by means of a formal notice dated 22nd July 2025[3]. It should be noted that the red line development application boundary is identical for the substation options and the grid connection options.

Notwithstanding the necessary dual consent process, a 'one project' approach has been taken in the preparation of the separate applications made to Carlow County Council and the subject application to An Coimisiún Pleanála. The various submitted reports considered the full combined development for the purpose of completing a robust assessment. In terms of definition, the use of the term 'proposed development' refers to the subject application before An Coimisiún Pleanála for the substation / grid connection. The use of the term 'solar farm projects' across this report means the project singular comprising the solar panels and support infrastructure, the substation and grid connection elements, and all associated enabling works.

This statement should be read in conjunction with other application documents including the Planning & Environmental Statement, Appropriate Assessment Screening / Natura Impact Statement, Ecological Impact Assessment Report, Landscape & Visual Impact Assessment, Archaeological, Architectural and Cultural Heritage Impact Assessment, and Construction Method Statement.

[2] Reference ABP-321855-25
[3] Reference ABP-321858-25

## 1.3 Background to EIA

The requirement for Environmental Impact Assessment (EIA) has its origins in Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. This Directive has been amended three times and was codified by Directive 2011/92/EU in 2011. Directive 2011/92/EU was then subsequently amended by Directive 2014/52/EU in 2014.

Projects requiring EIA are defined in Article 4 and set out in Annexes I and II of Directive 2014/52/EU. These provisions are in turn transposed into domestic Irish legislation through Schedule 5 of the Planning and Development Regulations 2001, as amended ("The Regulations").

In determining the requirement for EIA, Schedule 5 differentiates between different types of projects in the context of 'project types':

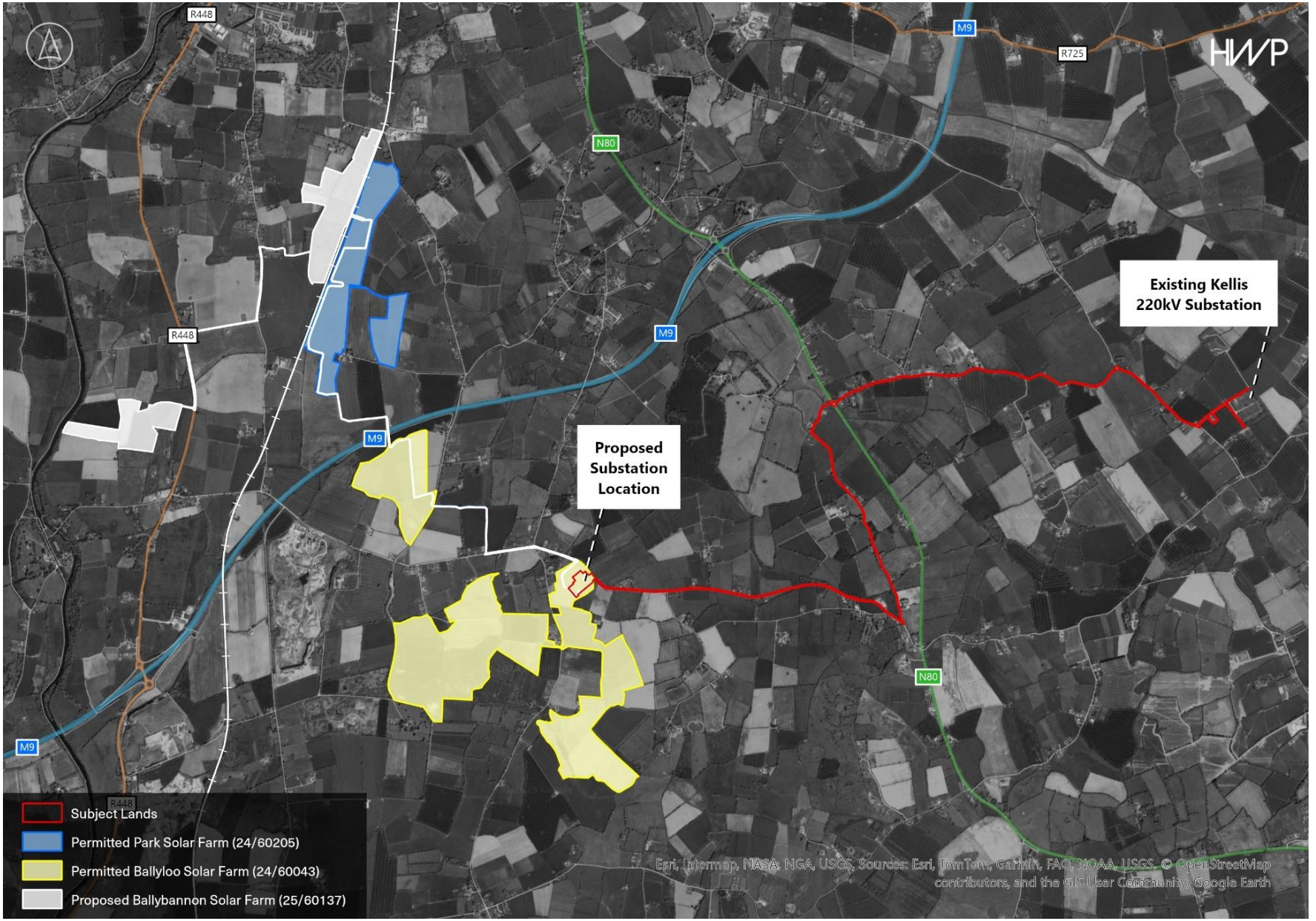
- Schedule 5 'Part 1' identifies project types which are anticipated to have significant effects on the environment, and which require mandatory EIA.
- Schedule 5 'Part 2' identifies projects which do not necessarily have significant effects but for which different thresholds or other criteria are applied, and if these are met, then EIA is required. In certain cases, projects which are identified in Part 2, but which fall below those thresholds and other criteria, may also require EIA. This is determined by the outcome of a sub-threshold EIA Screening which is undertaken in accordance with Schedule 7.

Having regard to the above, the first step in the EIA process is to undertake a screening exercise to determine whether or not EIA is required for a particular project. This report considers same relative to European best practice guidance on such matters.

Article 4(4) of the Directive 2014/52/EU introduces a new Annex IIA to be used in the case of screening determinations. Annex IIA of Directive 2014/52/EU requires that the following information be provided by a developer in respect of projects listed in Annex II:

> *"1. A description of the project, including in particular:*
>
> *a) a description of the physical characteristics of the whole project and, where relevant, of demolition works.*
>
> *b) a description of the location of the project, 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 project.*
>
> *3. A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from:*
>
> *a) the expected residues and emissions and the production of waste, where relevant.*
>
> *b) the use of natural resources, in particular soil, land, water and biodiversity.*
>
> *4. The criteria of Annex III shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3."*

The above referenced Schedule 7 of The Regulations details the criteria the planning authority must consider in determining whether a sub-threshold EIA should be undertaken. This schedule is a direct transposition of Annex III of EU Directive 2011/92/EU. EU Directive 2014/52/EU provides a revised Annex III and its transposition into national legislation is mandatory. Accordingly, the pro-forma included in Section 4 of this report provides a screening statement of the proposed development against the Annex III criteria of 2014/52/EU.


R448
M9
R725
N80
HWP
Existing Kellis
220kV Substation
Proposed
Substation
Location
Subject Lands
Permitted Park Solar Farm (24/60205)
Permitted Ballyloo Solar Farm (24/60043)
Proposed Ballybannon Solar Farm (25/60137)
Esri, Intermap, NASA, NGA, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Google Earth

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# Project Details

## 2.1 Description & Characteristics of Proposed Development

The electricity produced from the Ballyloo, Park and Ballybannon Solar Farms will be transported into the proposed substation.

The proposed substation will be either an Air Insulated Switchgear (AIS) or Gas Insulated Switchgear (GIS) tail fed substation with the associated grid connection comprising underground cabling which will connect into the existing 220/110kV Kellis substation.

As set out in Section 1, the applicant proposes design flexibility for the following development. The proposed development comprises of:

1. A 220kV Air Insulated Switchgear (AIS) or Gas Insulated Switchgear (GIS) electricity substation or a 110kV AIS electricity substation, including two control buildings, associated electrical structures and apparatus, lightning protection, telecom pole, perimeter security fencing, security lighting, water and drainage infrastructure, temporary construction compound to connect to and serve solar farms;
2. Associated grid connection between the proposed substation and the existing 110/220kV Kellis substation comprising 220kV or 110kV underground electricity cables (reflecting final substation option) of c.8.9 km or c. 8.65 km in length to be provided in an excavated trench including associated fibre cable and ducting, and all associated site development and reinstatement works. Two options are proposed after the first c.8.3 km of underground grid connection and for the final c.0.35 – 0.6 km of the underground cable grid connection route comprising (i) cabling in the L30535 public road, or (ii) cabling in private agricultural land;
3. Temporary construction and permanent operational access to the substation from the L3050, vehicular entrance and access track from this public road;
4. All ancillary site development, excavation, construction, landscaping and reinstatement works;
5. The development subject to this application forms part of grid connection and access arrangements which will facilitate the connection of the permitted Ballyloo Solar Farm (Carlow County Council Reference 24/60043 / An Coimisiún Pleanála Reference ABP-322347-25), permitted Park Solar Farm (Carlow County Council Reference 24/60205), and proposed Ballybannon Solar Farm (Carlow County Council Reference 25/60137) to the national electricity grid via the existing 110/220kV Kellis substation. A Natura Impact Statement (NIS) has been prepared in respect of the proposed development. The NIS includes consideration of the permitted Ballyloo and Park Solar Farms and the proposed Ballybannon Solar Farm which are located in County Carlow.

The operational lifetime of the solar farms is assumed to be 40 years. However, following the decommissioning of the solar farms, it is envisaged that the substation (and underground cable grid

connection) will remain in situ as a valuable functioning and operational part of the electricity transmission network managed by the Transmission Systems Operator, EirGrid.

### 2.1.1 Substation

#### 110kV AIS Substation

The substation will be based on EirGrid design specifications. The 110kV AIS substation will consist of both EirGrid and Independent Power Producer (IPP) including IPP Control Room buildings, HV electrical equipment and associated infrastructure including palisade fences and concrete post and rail fences. The installation of HV electrical equipment will include a Transformer (TRAFO) with associated equipment along with:

- Cable Sealing End (CSE);
- Surge Arrestor (SA);
- Earth Disconnect (DT);
- Current /Voltage Transformer (CT/VT);
- House Transformer (HT);
- Circuit Breaker (CB);
- Lightning Mast (LM);
- Diesel Generator;
- Security Fencing and Cameras;
- Drainage, access etc.

Earthworks will be undertaken so the compound is level, with a finish compound level of 100.72m.

The 110kV AIS substation layout is indicated in Figure 02. It should be noted that the red line development application boundary is identical for all substation options.

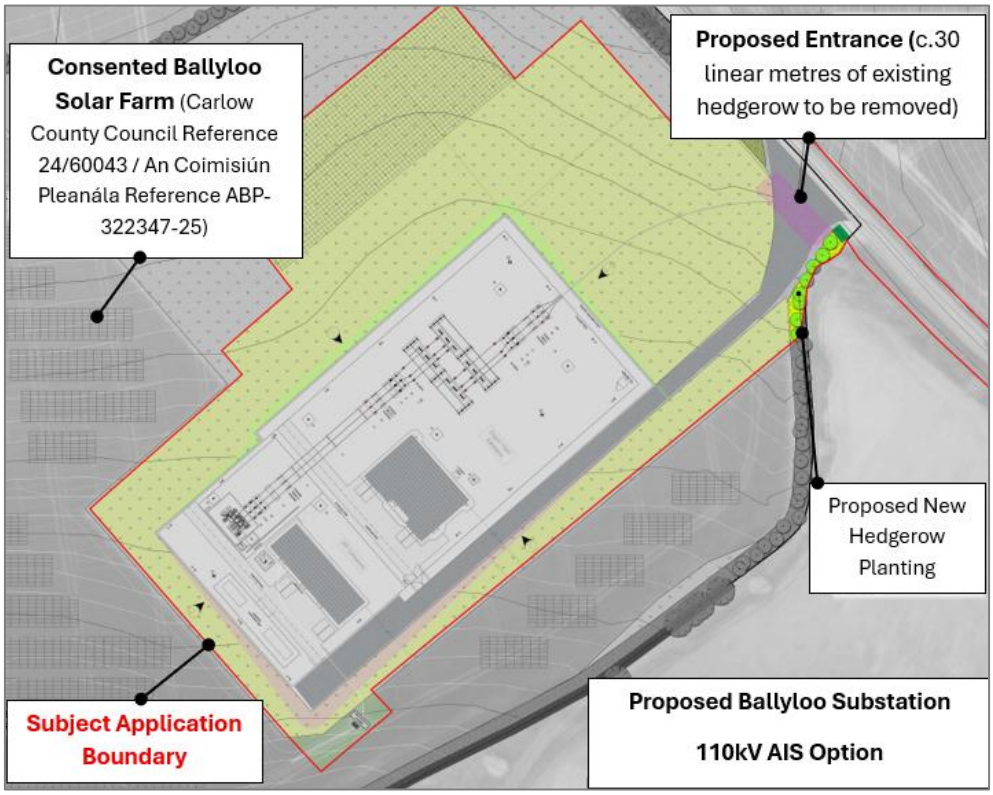


Figure 02: Proposed 110kV AIS Substation Option

## 220kV AIS Substation

The 220kV AIS substation will comprise the same infrastructure and equipment as the 110kV AIS substation option. The key difference is that the clearance distances required between individual components becomes greater at 220kV and therefore it has a larger footprint.

The 220kV AIS substation layout is indicated in Figure 03. It should be noted that the red line development application boundary is identical for all substation options.

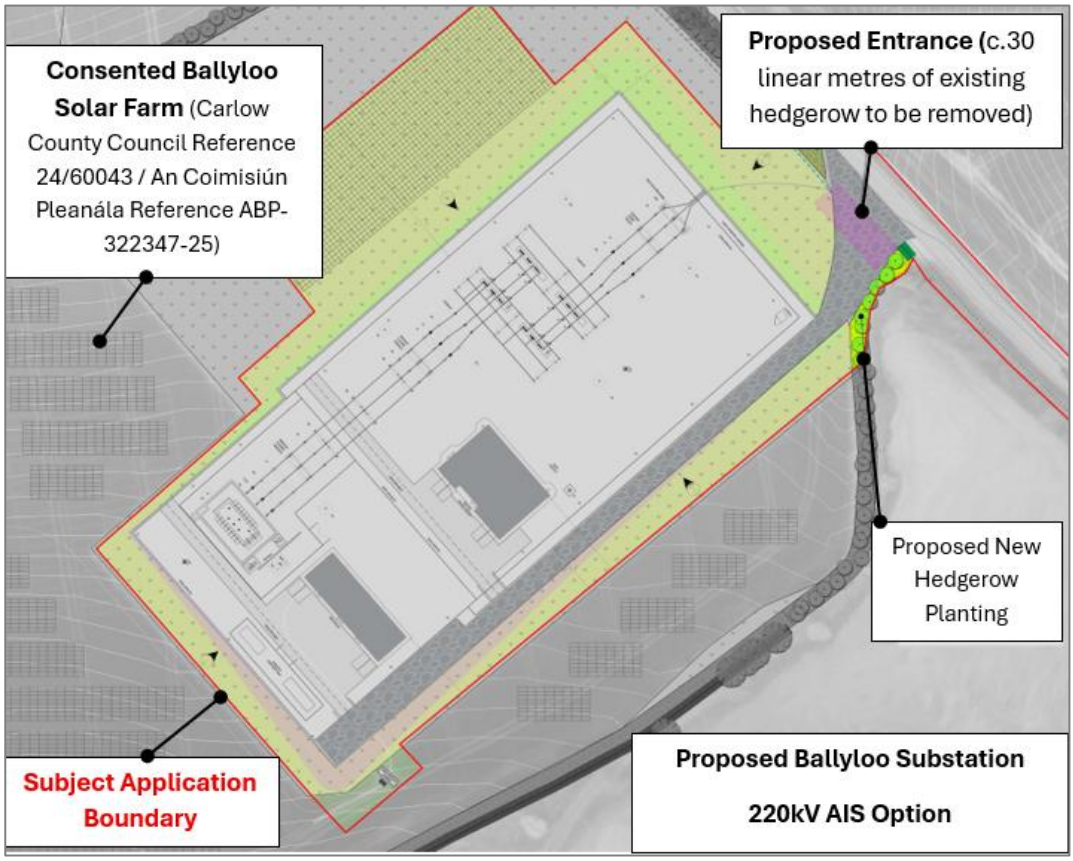


**Figure 03: Proposed 220kV AIS Substation Option**

## 220kV GIS Substation

The substation will be based on EirGrid design specifications. The substation compound will consist of a two storey GIS substation building, IPP Control Room building, High Voltage (HV) electrical equipment and associated infrastructure including palisade fences and concrete post and rail fences. The installation of HV electrical equipment will include a transformer with associated equipment along with:

- Lightning Masts (LM);
- Back-Up Diesel Generator;
- Harmonic filters if required by EirGrid;
- Capacitor Bank if required by EirGrid;
- Fire/Blast Wall;
- Telecoms Pole.

The 220kV GIS substation layout is indicated in Figure 04. It should be noted that the red line development application boundary is identical for all substation options.

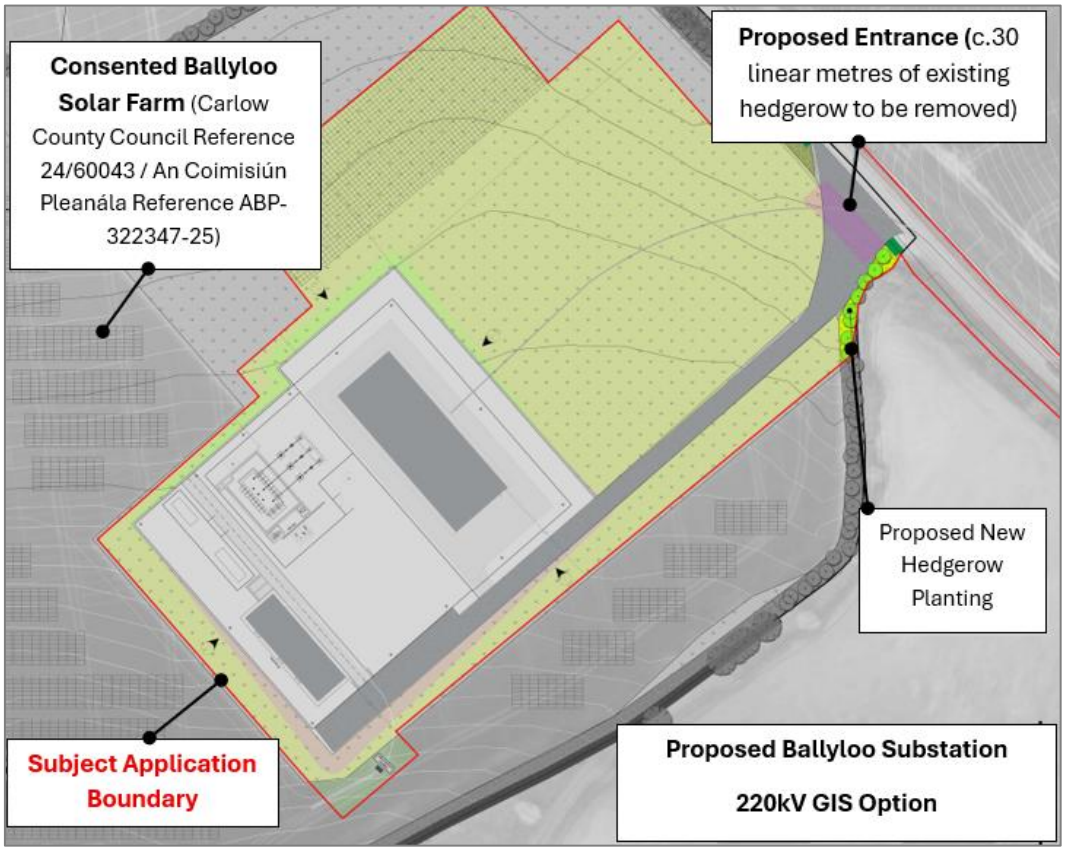


Figure 04: Proposed 220kV GIS Substation Option

### 2.1.2 Substation Access

It should be noted that the red line development application boundary is identical for all substation options.

Construction access to the substation will be provided by private lands, with a new entrance from the public road L3050. c.30 linear metres of existing hedgerow will be removed to facilitate the entrance. The entrance will be suitably splayed and has been subject to sight line and autotrack analysis, with the latter including modelling of abnormal load delivery for the transformer. The entrance will include a linear drain to ensure there is no potential for runoff to the public road.

A compacted access track will extend from the entrance to the substation compound. The track will include a geotextile base and filter membrane and 200 mm of Clause 804 sub-base. There will be sections of temporary track alongside the permanent track to facilitate delivery of the transformer within the site. The autotrack analysis has demonstrated that delivery of the substation transformer can be safely accommodated.

### 2.1.3 Temporary Construction Compound

As outlined in the submitted site layout plans, it is proposed to provide a temporary construction compound, accessed from the entrance from the L3050. The temporary compound will include the following facilities at a minimum:

- Adequate canteen space to allow for all workers during the peak period;
- Office space with lighting, heating and internet facilities;

- Toilets and adequate welfare facilities for construction staff in accordance with the relevant statutory Health & Welfare guidelines;
- Parking space for both light and heavy vehicles;
- Designated skips and temporary storage areas.

### 2.1.4 Surface Water Drainage and Water Services

#### 110kV & 220kV AIS Substations

It should be noted that the surface water drainage proposals are similar for both the 110kV and 220kV AIS substation options described in this report.

Surface water drainage for the substation compound have been designed to mimic the natural drainage patterns of the site and thereby be in accordance with the Best Management Practices (BMPs) of Sustainable Drainage Systems (SuDS).

This is achieved when the following parameters are considered:

- The compound construction is formed with permeable stone thus mimicking a soakaway scenario. ESB compound stone is single sized for the first 150mm for safety purposes. It then changes to a graded 6F2 material. The area of this permeable surface is circa 8,315m2 for the 110kV AIS substation option and 13,600m2 for the 220kV AIS substation option.
- The main areas to be drained includes the roofs and the compound road. These equate to approximately 1,592m$^2$ for the 110kV AIS substation option and 2,023m2 for the 220kV AIS substation option. These areas are modest in themselves and in comparison to the overall compound area. The compound road will be drained via series of road gullies.
- Assuming even the most basic of infiltration rates down through the permeable compound stone, the existing greenfield situation is easily maintained.

The surface water generated in the hardstanding areas and in the bunded areas within the substation compound will discharge to soakaway via Class 1 Full Retention Oil Separators. The electrical transformer in the substation is oil filled equipment and, as such, is protected with impermeable bunds. Surface water generated in this bund will be pumped out by an oil sensitive pump ensuring that only non-contaminated water enters the site drainage network.

#### 220kV GIS Substation

Surface water drainage for the substation compound have been designed to mimic the natural drainage patterns of the site and thereby be in accordance with the Best Management Practices (BMPs) of Sustainable Drainage Systems (SuDS).

This is achieved when the following parameters are considered:

- The compound construction is formed with permeable stone thus mimicking a soakaway scenario. ESB compound stone is single sized for the first 150mm for safety purposes. It then changes to a graded 6F2 material. The area of this permeable surface is circa 7,660m2 for the GIS substation.

- The main areas to be drained includes the roofs and the compound road. These equate to approximately 2,746m$^2$. The compound road will be drained via series of road gullies.

The surface water generated in the hardstanding areas and in the bunded areas within the substation compound will discharge to soakaway via Class 1 Full Retention Oil Separators. The electrical transformer in the substation is oil filled equipment and, as such, is protected with impermeable bunds. Surface water generated in this bund will be pumped out by an oil sensitive pump ensuring that only non-contaminated water enters the site drainage network.

### 2.1.5 Substation Foul Water Drainage

It should be noted that the foul water drainage proposals are the same for all AIS and GIS substation options described in this report.

There are no existing foul sewer water drains on or near the proposed substation site.

The foul drainage proposal must cater for the wastewater generated in the welfare facilities of the proposed substation. These welfare facilities include a toilet and wash hand basin both the EirGrid and IPP control buildings. The station will be unmanned in normal operation so demand for facilities which generate foul flows will be low.

Foul holding tanks are normally used in EirGrid and ESB substations. The foul holding tanks will have a capacity of 5m3 which is a multiple of the foul water generated over three months of normal operation of the station. The foul holding tank will also be inspected by a suitably qualified and indemnified person at these intervals and records of inspections will be held on site for inspection by the local authority.

### 2.1.6 Substation Water Supply

It is proposed to provide the required potable water demand of the station (all options) with a bored well on site. The potable water demand within the site will be low as the proposed station is to be unmanned. To avoid issues like stagnation in the water supply line and problems resulting from this, there will be a continual water demand of 24 litres per week from automatically flushing WCs within the station.

### 2.1.7 Grid Connection

The substation will connect to the existing 220/110 kV Kellis substation via a proposed 110kV or 220 kV underground grid connection cable.

The overall length of the grid connection is approximately 8.9km at its longest . The route is shown in Figure 05. All works will be carried out in accordance with international best practice and full compliance with health and safety requirements.

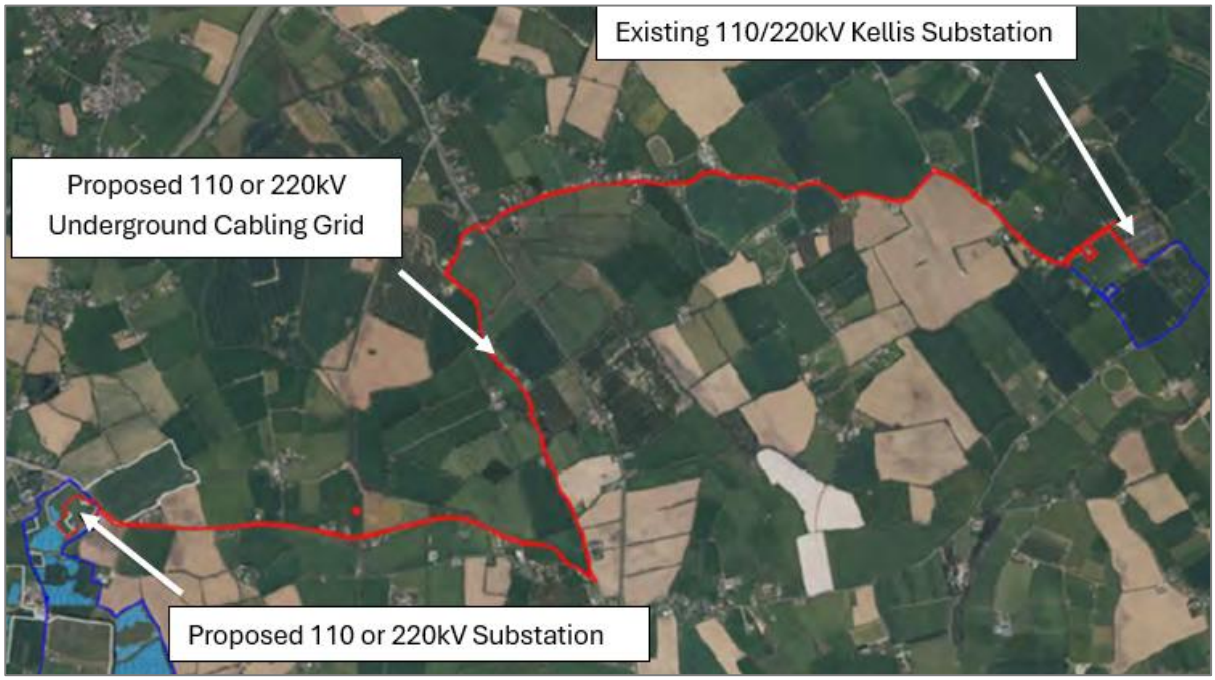


**Figure 05: Underground Cabling Grid Connection Overview**

It should be noted that the red line development application boundary is identical for both the 110kV and 220kV grid connection cable options. The route travels east from the proposed substation on the L3050 before turning north onto the L30504. It then crosses the N80 at Castletown Cross Roads and continues east on the L7148 before turning south onto the L3053. The cable would then turn east onto the L30535 which is the main road access to the existing 220/110kV Kellis substation. There are two options proposed for the final c.0.35-0.6km section accessing the substation. One option (Option A) is within privately owned agricultural lands and the other option (Option B) is via the L30535 local road. Both options are indicated in Figure 06. In the case of Option A, c. 1m of hedgerow will be temporarily removed for the purposes of laying the cable into the substation lands. This will be reinstated.

Planning permission is being sought from An Coimisiún Pleanála for a proposed grid connection between the proposed Ballyloo Substation and Kellis 110/220kV Substation, and underground cable run of up to c.8.9km metres which terminates at the boundary of the Kellis 110/220kV substation. As set out in the submitted plans and technical reports, it will be necessary to install a new line bay in the Kellis 220kV substation. This will require an additional short distance of underground cabling into the substation. The connecting line bay will consist of concrete bases, steelwork and electrical equipment similar to the already installed equipment within the station. This additional infrastructure will be subject to a future consenting process and is included for information in this planning application so that a robust assessment can be made of the entire application.

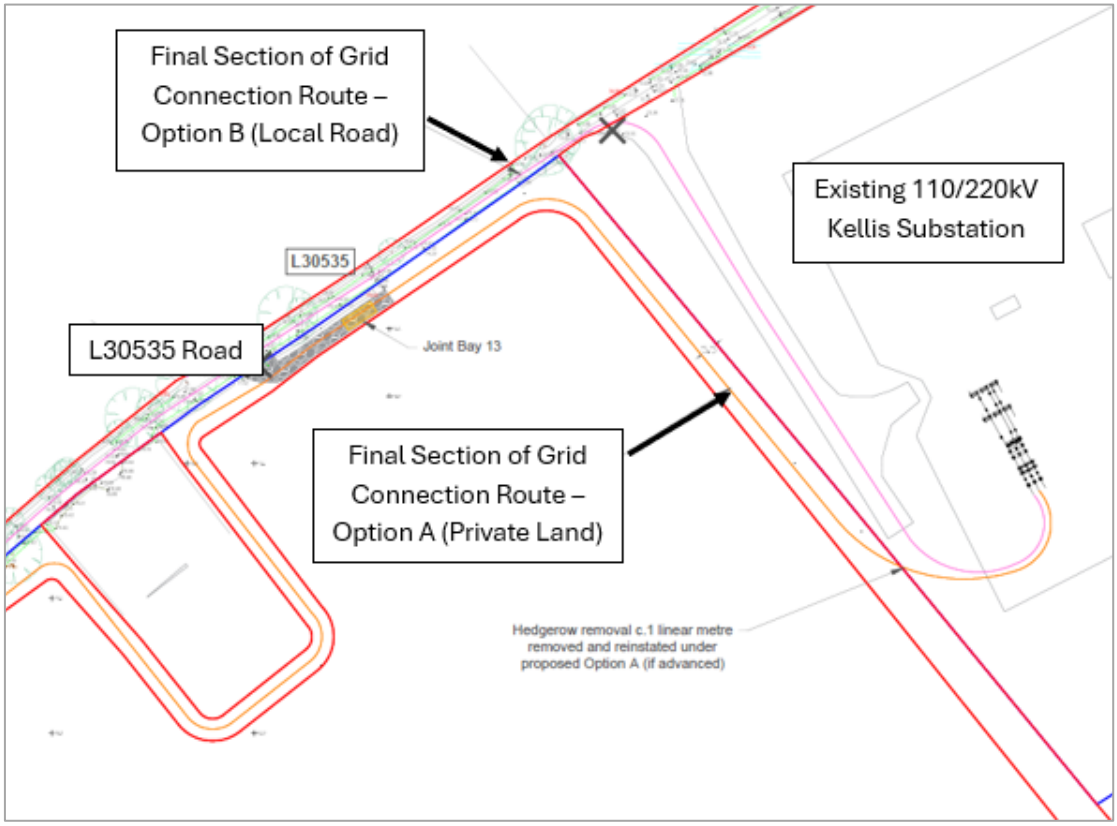


Figure 06: Final Underground Cabling Options on Public Road / Private Lands

### 2.1.8 Site Reprofiling

The subject site is relatively flat in nature but analysis of topographic data confirms that cutting and filling of the existing terrain will be required to establish a level platform for the substation compound.

#### 110kV and 220kV AIS Substations

For the 110kV substation option, the amount of cut to be transported off site is expected to be c.3,443m3. Similarly, the necessary amounts of fill material will be transported onto site. This is expected to be c.3,838m3. For the 220kV substation option, the amount of cut to be transported off site is expected to be c.7,229m3. Similarly, the necessary amounts of fill material will be transported onto site. This is expected to be c.7,868m3.

#### 220kV GIS Substation

The amount of cut to be transported off site is expected to be c.3,495m3. Similarly, the necessary amounts of fill material will be transported onto site. This is expected to be c.3,472m3.

In all cases, any surplus soil will be disposed of offsite by means of an Article 27 declaration (European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011)) from the EPA or by means of transfer to an appropriate and licensed waste disposal facility.

### 2.1.9 Site Restoration and Landscaping

**This will involve the reinstatement of all other excavated materials and associated landscaping works. It will include the replacement of topsoil in disturbed ground areas such as access tracks and the removal of the construction compound and other temporary**

**work areas. The proposed development provides for the removal c.30 linear metres of hedgerow at the substation site entrance and c.1 linear metre removed and reinstated under proposed Option A (if advanced) where the cable alignment passes through a field boundary near the Kellis 220kV sub. There is some 32 linear meters of new hedgerow proposed and 15 linear meters of bolstered hedgerow within the project red-line boundary. The application is accompanied by 3 no. landscape mitigation plans by Macro Works, reflecting the three substation options that may be implemented.**

### 2.1.10 Other Planned Works

It is intended that the proposed substation and grid connection will service the permitted Ballyloo and Park Solar Farms, as well as the proposed Ballybannon Solar Farm which is under consideration by Carlow County Council.

*Carlow County Council Reference 24/60043 / An Coimisiún Pleanála Reference ABP-322347-25*

An application for the Ballyloo Solar Farm was made to Carlow County Council on the 28th February 2024. The solar farm application design as submitted to Carlow County Council comprised of the following:

> *A 10 Year Planning Permission for a solar farm with a total area of circa 192 hectares in the townlands of Ballybar Upper, Ballyloo, Ballyryan, Garryhundon, and Linkardstown, in County Carlow. The solar farm will consist of solar panels on ground mounted frames, 30 no. single storey electrical inverter/transformer stations, 4 no. single storey spare parts containers, 4 no. Ring Main Units, 8 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 2 no. stream deck crossings and 1 no. horizontal directional drill, temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 4 no. entrances from the L3051, L3052 and L3050. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application.*

The scheme was revised at Request for Further Information stage to include, inter alia, a reduction in the paneled area including omission of c.11.6 ha easternmost field (Parcel 4) of the project. The Council issued a Notification of Decision to Refuse Permission on the 25th March 2025 and a First Party Appeal was submitted by to An Coimisiún Pleanála on the 22nd April 2024. Permission was granted by An Coimisiún Pleanála on the 5th September 2025.

*Carlow County Council Reference 24/60205*

An application for the Park Solar Farm was made to Carlow County Council on the 19th July 2024. The solar farm application design as submitted to Carlow County Council comprised of the following:

> *A 10 Year Planning Permission for a solar farm with a total area of circa 73 hectares. The solar farm will consist of solar panels on ground mounted frames, 11 no. single storey electrical inverter/transformer stations, 3 no.*

*single storey spare parts containers, 2 no. Ring Main Units, 3 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L1010, L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 3 no. watercourse/drain deck crossings and 2 no. horizontal directional drill crossings (under M9 motorway and L3050), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 2 no. entrances from the L1022 and L1010. Sections of the proposed underground electrical cabling will traverse the solar farm proposed under Carlow County Council Reference 24/60043, but will not alter infrastructure proposed under that application. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application.*

The Council issued a Notification of Decision to Grant Permission on the 24th April 2025. The applied conditions provided for the removal of Parcel 1 from the permitted solar farm.

*Carlow County Council Reference 25/60137*

An application for the Ballybannon Solar Farm was made to Carlow County Council on the 22nd May 2025 for the following development:

*A 10 Year Planning Permission for a solar farm with a total area of circa 57 hectares in the townlands of Ballybannon, Ballybar Lower, Ballybar Upper, Ballycarney, Ballyloo, Cloghna, Linkardstown and Park in County Carlow. The solar farm will consist of solar panels on ground mounted frames, 8 no. single storey electrical inverter/transformer stations, 2 no. single storey spare parts containers, 1 no. Ring Main Unit, 3 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L4038, L8185, R448, L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 5 no. watercourse/drain deck crossings and 2 no. horizontal directional drill crossings (under M9 motorway and the Dublin - Waterford railway), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 2 no. existing entrances from the R448 and L1010. Sections of the proposed underground electrical cabling will traverse the solar farms proposed under Carlow County Council References 24/60043 and 24/60205, but will not alter infrastructure proposed under these applications. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application.*

The Council issued a notification to grant on the 31st October 2025.

## 2.2 Planning History

A review of the Carlow County Council and An Coimisiún Pleanála Planning Enquiry Systems indicates that 3 previous valid solar farm planning application has been made with some overlap

with the proposed substation compound. These applications relate the 3 solar farms that it is proposed to connect to the proposed substation.

Reference: 24/60043

**Applicant:** Ballyloo Solar Farm Limited

**Address:** In the townlands of Ballybar Upper, Ballyloo, Ballyryan, Garryhundon and Linkardstown, County Carlow.

**Date Received:** 28/02/2024

**Description:** A 10 Year Planning Permission for a solar farm with a total area of circa 192 hectares. The solar farm will consist of solar panels on ground mounted frames, 30 no. single storey electrical inverter/transformer stations, 4 no. single storey spare parts containers, 4 no. Ring Main Units, 8 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 2 no. stream deck crossings and 1 no. horizontal directional drill, temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 4 no. entrances from the L3051, L3052 and L3050. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application.

**Decision:** Permission was granted by An Coimisiún Pleanála on the 5th September 2025.

Reference: 24/60205

**Applicant:** Ballyloo Solar Farm Limited

**Address:** In the townlands of Ballybar Lower, Ballybar Upper, Ballycarney, Ballyloo, Linkardstown, Park and Tinryland, County Carlow.

**Date Received:** 19/07/2024

**Description:** A 10 Year planning permission for a solar farm with a total area of circa 73 hectares in the townlands of Ballybar Lower, Ballybar Upper, Ballycarney, Ballyloo, Linkardstown, Park and Tinryland in County Carlow. The solar farm will consist of solar panels on ground mounted frames, 11 no. single storey electrical inverter/transformer stations, 3 no. single storey spare parts containers, 2 no. Ring Main Units, 3 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L1010, L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 3 no. watercourse/drain deck crossings and 2 no. horizontal directional drill crossings (under M9 motorway and L3050), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 2 no. entrances from the L1022 and L1010. Sections of the proposed underground electrical cabling will traverse the solar farm proposed under Carlow County Council Reference 24/60043, but will not alter infrastructure proposed under that application. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application

**Decision:** Permission was granted by Carlow County Council on the 27th May 2025.

Reference: 25/60137

**Applicant:** Ballyloo Solar Farm Limited

**Address:** In the townlands of Ballybannon, Ballybar Lower, Ballybar Upper, Ballycarney, Ballyloo, Cloghna, Linkardstown and Park, in County Carlow.

**Date Received:** 22/05/2025

**Description:** A 10 Year Planning Permission for a solar farm with a total area of circa 57 hectares. The solar farm will consist of solar panels on ground mounted frames, 8 no. single storey electrical inverter/transformer stations, 2 no. single storey spare parts containers, 1 no. Ring Main Unit, 3 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L4038, L8185, R448, L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 5 no. watercourse/drain deck crossings and 2 no. horizontal directional drill crossings (under M9 motorway and the Dublin - Waterford railway), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 2 no. existing entrances from the R448 and L1010. Sections of the proposed underground electrical cabling will traverse the solar farms proposed under Carlow County Council References 24/60043 and 24/60205, but will not alter infrastructure proposed under these applications. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application.

**Decision:** The Council issued a Notification to Grant Planning Permission on the 31st October 2025.

Alongside the above, there are a number of other planning applications that have been permitted locally around the existing Kells Substation. In some cases, the grid connection for some of these energy projects have an interaction with the red-line boundary (as it relates to possible cabling in the L30535 public road) for the final sections of the grid connection. A table of other projects is enclosed in Appendix A.

## 2.3 Description of Location of Site

The site area of the proposed substation compound is approximately 2.4 hectares within an agricultural field accessed off the L3050 local road. The associated grid connection extends across the townlands of Castletown, Graiguenaspiddoge, Kellistown East, Kellistown West, Kilballyhue, Knockbower, Leagh Or Ballybeg, Linkardstown and Moyle Big (total red-line boundary area of 11.6 hectares). The proposed grid connection is contained within the existing public road network, with the potential exception of the final 0.6km of the underground cable route to the existing Kellis 110/220kV Substation which may be laid across private agricultural lands. The existing Kellis 110/220kV Substation is a particularly important substation on the transmission network, as it has multiple ways of receiving and transmitting large power volumes. This type of substation is known as a “mesh node” and makes Kellis substation very suitable for accommodating large renewable generation projects.

The proposed substation site is located c.2km south of the settlement of Tinryland, 5km south of Carlow Town and c1.6km to the north of the village of Nurney. It is proposed to access the site via a new entrance off the L3050 local road which will be created by the removal of c.30 linear metres of existing hedgerow.

## 2.4 Environmental Sensitivities

### 2.4.1 Landscape

A Landscape Character Assessment has been incorporated into the Carlow County Development Plan 2022 – 2028 which separates the county into specific Landscape Character Types (LCTs). The proposed development and wider solar farm are situated in the LCA 'Central Lowlands' which is described as "primarily rural...with medium to quite large fields defined by well maintained and generally low hedges and occasional to frequent hedgerow trees". The LCA 'central lowlands' is "*deemed to be moderately sensitive to development. It has capacity to absorb most types of development subject to the implementation of appropriate mitigation measures*".

### 2.4.2 Amenity

As with any new development, there is the potential for impacts on amenity for adjacent residential properties. To address this potential issue a suite of technical reports in relation to landscape and visual, and noise have been prepared. The layout of the proposed substation / grid connection has considered proximity to existing residential properties in full. The proposed substation is an inland development, set back from public roads and residential properties. The nearest third party dwellings to the substation compound area are approximately 152 metres to the west, 160 metres to the north, and 259 metres away to the east. Based on this analysis, the layout and landscaping approach has been developed and it has been demonstrated that the proposal will protect the amenity of existing residents in the area.

### 2.4.3 Biodiversity & European Sites

Field surveys of the proposed development were carried out to inform the submitted Ecological Impact Assessment (EcIA). The proposed substation development site is currently considered to be of Local Importance (lower level) as it contains intensively managed arable agricultural land and regularly occurring species. There will be no permanent impacts on semi-natural habitats. The development footprint is confined to open intensively managed agricultural fields, which are considered to be of lower local ecological value.

With the exception of a potential section of the final underground cable route on private agricultural land, the grid connection is predominantly within the local road (Buildings and Artificial Surfaces – BL3). Any potential effects on ecology as a result of the proposed development are confined to the construction phase, which will be relatively short in duration (approximately 2 years) and will be insignificant due to the minor nature of the earthworks involved combined with the implementation of standard environmental controls as part of the project. The HDD crossing of the Kilmeany removes the requirement for works in or adjacent to a watercourse which is distantly upstream of the River Barrow and River Nore SAC (>9.5km upstream). No significant effects on designated sites, habitats, flora or fauna have been identified as a result of the proposed development.

Any potential negative effects on ecology as a result of the wider solar farm developments, including substation and underground grid connection, are limited to the construction phase, which will be relatively short in duration. The identified risks are relatively minor in nature and largely related to potential run-off.

Furthermore, the Natura Impact Statement (NIS) in support of the Appropriate Assessment process objectively concludes that, with the implementation of mitigation measures, no significant effects arising from the development will impact upon any Natura 2000 sites. The nearest designated site is the River Barrow and River Nore SAC

Taking the above into consideration, it is deemed that the proposed development will result in a neutral to slight positive residual effect on ecology overall.

The proposed substation / grid connection is a component part of the permitted Ballyloo and Park Solar Farms, as well as the proposed Ballybannon Solar Farm. All three applications include focused Biodiversity Management Plans which were prepared as an integral part of these planning applications. These BMPs have been tailored to reflect local ecological survey work completed, contributing positively to the protection and enhancement of the local ecosystems around the solar farm sites. These include specific management techniques like planting native wildflowers, creating pollinator habitats, and installing bat and bird boxes to support biodiversity, while also addressing potential impacts on existing habitats and species. These plans are underpinned by landscape and maintenance management schedules for ongoing monitoring towards the achievement of biodiversity goals commensurate with the provision of a clean form of renewable energy.

The following table summarizes landscape figures for the three solar farm projects to be serviced by the subject substation / grid connection. They confirm that areas of small localized hedgerow removal will be offset by considerable landscaping planting in support of the principle of biodiversity gain across the local area.

| Project | Hedgerow Removal | Planting |
|---|---|---|
| Ballyloo Solar Farm | 47 linear metres | 3,523 new linear metres of hedgerow. 13,425 linear metres of bolstered hedgerow. 2,611sqm native woodland. |
| Park Solar Farm | 37 linear metres | 392 new linear metres of hedgerow. 3,841 linear metres of bolstered hedgerow. 24,512sqm native woodland. |
| Ballybannon Solar Farm | 240 linear metres[4] | 441 new linear metres of hedgerow. 7,100 linear metres of bolstered hedgerow. 9,188 sqm of native woodland. |
| Total | 324 linear metres | 4,356 new linear metres of hedgerow. 25,983 linear metres of bolstered hedgerow. 36,311 sqm of native woodland. |

### 2.4.4 Traffic Impact

It is proposed to access the site via a single entrance from the L3050. This is a new entrance which will be formed by the removal of c.30 linear metres of existing hedgerow. The entrance will be suitably splayed and has been subject to sight line and autotrack analysis, with the latter including modelling of abnormal load delivery for the transformer. The entrance will include a linear drain to ensure there is no potential for runoff to the public road. The substation and solar farm will be

[4] 180 metres of this relates to the removal of hedgerow to facilitate a sightline, as requested by Carlow County Council.

unmanned once operational, with trips confined to maintenance staff accessing the site by light goods vans. These movements will be limited to 2-4 trips per month on average. As such, the operational development will give rise to a decrease in both the volume and scale of vehicles accessing the site comparable to existing agri-generated traffic.

The construction phase has the potential to increase traffic congestion and/or public safety hazard, with the significance of impacts likely to be moderate without appropriate mitigation. The submitted Site Access Report confirms that the volume of vehicular movements across the construction phase will vary with an average of c. 10 no. trips per day (equivalent of 1 trip per hour). Section 10 of the Site Access Report includes a number of focused mitigation measures to minimise the impact on existing road users arising from the temporary construction phase. These include a temporary manual-controlled stop/go system, advance warning signage and a booking system for site deliveries to avoid potential access conflicts.

### 2.4.5 Noise

The noise generating plant associated with the substation and solar farm projects are the inverters and the 220kV or 110kV substation transformer, which is the focus of the SID application being made to An Coimisiún Pleanála. As illustrated on the site layout plans, this plant is located centrally, away from local receptors. This is reflected in the findings of the noise assessment with the modelled noise levels at the facades of neighbouring dwellings well below the recommended EPA/WHO/BS8233 guidelines of 55dB during day time and 45dB at night time.

The noise generated from construction activities and related powered mechanical equipment has the potential to pose adverse noise impacts to existing surrounding sensitive receivers. The construction phase of development due to its nature is temporary and therefore any potential noise impacts will be short term. Potential noise impact will be controlled by means of day-time working hours and in accordance with all relevant British Standards Codes of practices such as: BS 5228-1: 1997 “Noise Control on Construction and Open Sites -Part 1”; BS 5228:2009 and AI:2014 “Code of practice for noise and vibration control on construction and open sites”. The submitted Noise Impact Assessment confirms that there will be no adverse impacts in the local environment arising from either the construction or operational phases.

### 2.4.6 Heritage

A detailed Archaeological, Architectural and Cultural Heritage Impact Assessment (AIA) of the proposal has been prepared and is enclosed with this application. The proposal has been designed having regard to site inspections and analysis undertaken. A strategy of mitigation by avoidance has been adopted. The location of the proposed substation was the subject of a preceding geophysical survey under Carlow County Council Reference 24/60043 which identified two anomalies, (CH050–CH051). There was a single area of archaeological potential (CH049) identified by landscape characteristic. As currently laid out, there are no RMPs located within the proposed substation or any Zones of Notification crossed by the proposed substation. In addition, there are no RMPs located within the route of the proposed grid connection. However, the proposed grid connection will cross the Zone of Notification for six RMPs (CH021, CH024–CH028). Where the proposed grid connection crosses the Zone, it will comprise an underground cable within the existing public road, which is previously disturbed ground. No impacts are envisaged.

Having regard to the archaeological assessment completed for the Ballyloo Solar Farm, a suite of mitigation measures were put forward previously and agreed with a meeting with National Monuments Service in January 2025. These measures are recommended again as part of the

submitted Archaeological, Architectural and Cultural Heritage Impact Assessment for the subject application to An Coimisiún Pleanála . These include a programme of advance archaeological works prior to construction (a combination of further geophysical survey and testing trenching to be completed under license), archaeological monitoring and strict reporting requirements.

### 2.4.7 Flood Risk

minor and limited area of the proposed grid connection route may be susceptible to an extreme flood event associated with the Kilmeany Stream. However, the proposed connection and cables are to be constructed underground within the public road network and designed in a manner to prevent the ingress of water. A horizontal directional drill (HDD) shall be used to cross under the Kilmeany Stream. The site of the substation component of the proposed does not fall within any within an indicative, predictive, historic or anecdotal flood zone., and therefore the potential flood risk of the overall proposed development is considered to be low.

Overall, and in consideration of the type and form of development proposed, this Site Specific Flood Risk Assessment indicates that the proposed substation and grid connection development is not predicted to result in an adverse impact to the hydrological regime of the area or increase flood risk elsewhere and is therefore considered to be appropriate from a flood risk perspective.

### 2.4.8 Soil

The national Teagasc Subsoils dataset classifies subsoils. Based on a review of the Irish Soil Information System National Soils Map, the site area comprises of Elton - Luvisol: Well drained mineral soils. There are no karst landforms or rock outcrops indicated on the site.  Potential impacts on land, soil and geology in the absence of appropriate construction phase measures include the following:

- Soils have the potential to become polluted by spillages during construction.
- Soils have the potential to be compacted by plant and machinery during construction.

No potential impacts on land, soils, geology, surface water or groundwater during the operational phase of the proposed development are envisaged.

As outlined above, surface water drainage proposals for the proposed development have been developed to mimic the natural drainage patterns of the site and thereby be in accordance with the best management practices of Sustainable Drainage Systems (SuDS).

### 2.4.9 Cumulative Impacts

This screening assessment has also considered potential cumulative impacts that could arise from the proposed development in combination with other known projects in the area. A desktop review of other local projects in the vicinity was undertaken using the Carlow County Council and An Coimisiún Pleanala planning enquiry systems.

In addition to the proposed Ballyloo, Park and Ballysallagh Solar Farms, there are a number of similar energy projects permitted and proposed in the wider area. These projects have been included in the table below.

## Table 1: Summary planning applications related to extant solar farms in the area

| Ref. Number | Distance from Subject Site | Status | Description |
|---|---|---|---|
| 24/60205 | 0km | Granted Permission – 24/04/2025 | A 10 Year planning permission for a solar farm with a total area of circa 73 hectares in the townlands of Ballybar Lower, Ballybar Upper, Ballycarney, Ballyloo, Linkardstown, Park and Tinryland in County Carlow. The solar farm will consist of solar panels on ground mounted frames, 11 no. single storey electrical inverter/transformer stations, 3 no. single storey spare parts containers, 2 no. Ring Main Units, 3 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L1010, L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 3 no. watercourse/drain deck crossings and 2 no. horizontal directional drill crossings (under M9 motorway and L3050), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 2 no. entrances from the L1022 and L1010. Sections of the proposed underground electrical cabling will traverse the solar farm proposed under Carlow County Council Reference 24/60043, but will not alter infrastructure proposed under that application. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application |
| 24/60043 | 0km | Granted Permission – 05/09/2025 | A 10 Year Planning Permission for a solar farm with a total area of circa 192 hectares. The solar farm will consist of solar panels on ground mounted frames, 30 no. single storey electrical inverter/transformer stations, 4 no. single storey spare parts containers, 4 no. Ring Main Units, 8 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 2 no. stream deck crossings and 1 no. horizontal directional drill, temporary construction compounds, landscaping and all associated ancillary |

| | | | |
|---|---|---|---|
| | | | development and drainage works. Construction and operational access will be via 4 no. entrances from the L3051, L3052 and L3050. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application |
| 25/60137 | 0km | Notification to grant – 31/10/25 | A 10 Year Planning Permission for a solar farm with a total area of circa 57 hectares. The solar farm will consist of solar panels on ground mounted frames, 8 no. single storey electrical inverter/transformer stations, 2 no. single storey spare parts containers, 1 no. Ring Main Unit, 3 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L4038, L8185, R448, L3051, L3052 and L3050 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 5 no. watercourse/drain deck crossings and 2 no. horizontal directional drill crossings (under M9 motorway and the Dublin - Waterford railway), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 2 no. existing entrances from the R448 and L1010. Sections of the proposed underground electrical cabling will traverse the solar farms proposed under Carlow County Council References 24/60043 and 24/60205, but will not alter infrastructure proposed under these applications. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application. |
| 24/60410 | 0.1km | Granted Permission – 06/06/25 | The replacement (“restringing”) of the existing overhead line circuit conductor wires with a new higher capacity conductor • the strengthening of foundations at 7no. locations • shear block remedial works at 77no. locations • the strengthening of towers (i.e., member replacement) at 34no. locations • the replacement of 5.1km of earthwire • the painting of all structures • the replacement of insulating and ancillary hardware at structures • all associated works within the existing Kellis 220kV substation to accommodate the uprated 220kV OHL including uprating of the Great Island bay in Kellis 220kV substation. |
| 24/60223 | 0.1km | Granted Permission – 20/09/2024 | 110kV underground electricity cabling and all associated ancillary site development works. The cabling will extend from and connect with permitted 110kV underground electricity cabling (under An Bord Pleanála reference ABP-313139-22) on the L30535 public road to a line bay in the Kellis 220kV substation. |

| | | | |
|---|---|---|---|
| 313139-22 | 0.1km | Granted Permission – 03/11/2022 | Proposed 110kV substation and underground grid connection. |
| 20143 | 0.1km | Granted Permission – 2/09/2021 | A 10 year Planning Permission for a solar farm. |
| 24/60295 | 2.0km | Live Application, Decision Due – 07/01/2026 | Ten year planning permission for renewable energy development comprising of the construction of a solar farm. |
| ABP-303821 | 0.2km | Granted Permission – 23/09/2019 | 10 year permission for an up to 100MW Battery Energy Storage Facility providing energy services to the National Grid consisting of construction and operation of up to 34 metal containers. |
| ABP-320354 | c. 5.5km | Live Application, Decision Due – 04/12/2024 (Decision delayed at Board) | Permission for the construction of 7 wind turbines and all associated works. A 10 year planning permission and 35 year operational life of the wind farm from the date of commissioning is sought. Environmental Impact Assessment Report and Natura Impact Statement submitted with application. |
| 24/60295 | c.2.4km | Live Application, Decision Due – 7/01/2026 | Ten year planning permission for renewable energy development comprising of the construction of a solar farm. |
| 24/60332 | c. 1.8km | Granted Permission – 12/12/2024 | the demolition of all existing structures within the Tinryland Wastewater Treatment Plant and the construction on an extended site (0.09 ha in total) which will consist of a new pumping station (17m2), new below-ground storm tank (total storage of 123m$^3$), replacement welfare facility (33m2), ground-mounted photovoltaic array (83 m2), new palisade perimeter fencing (2.4m high) and associated works; the construction of a new rising main and gravity main (3.7km in length) along the Nurney Road, L1023 and N80, connecting to the existing wastewater sewer at |

| | | | |
|---|---|---|---|
| | | | Ballinacarrig; and all ancillary and associated temporary works. A Natura Impact Statement (NIS) will be submitted to the Planning Authority with the application |
| ABP-318295 | c. 3.7km | Granted Permission – 21/11/2024 | Construction of five wind turbines, meteorological mast, electricity substation and associated site works. The application is accompanied by a Planning Report, Environmental Impact Assessment Report and a Natura Impact Statement. |
| 24/60149 | c. 1.4km | Granted Permission – 27/09/2024 | The expansion of the existing commercial store into the adjoining agricultural use buildings including raised roof height to the unit to the east and the provision of a retention pond and all associated ancillary works, the buildings will be repurposed as whiskey maturation warehouses |
| ABP-318475 | c. 8km | Granted Permission – 04/06/2024 | A ten year planning permission for a solar energy development with a total site area of 77 hectares and all associated site works. |
| ABP-315063 | c. 0.1km | Granted Permission – 02/05/2024 | Development of a synchronous condenser grid support facility and all associated works |
| ABP-315365 | c. 5.5km | Granted Permission – 21/11/2023 | Wind energy development consisting of 7 no. wind turbines and all associated works. |
| ABP-322690 | c.0km | Live Application - due to be decided by 01/12/2025 | Proposed 110kV electrical substation and grid connection. |
| ABP-321416 | c.3km | Live Application – undetermined at present | Proposed development along a section of the N80 Road known as the N80 Leagh Bends Scheme. |

| | | | |
|---|---|---|---|
| 21/23 | c.3.75km | Granted 26/10/21 | Construction of a Solar PV development and all associated site works. |
| 23/92 | c.3.85km | Granted 04/06/2024 | A ten year planning permission for a solar energy development with a total site area of 77 hectares and all associated site works. |
| 22/142 | c.3km | Granted Permission – 22/03/2023 | Clonmacshane Solar Farm. |
| ABP-314421 | c. 460m | Granted Permission – 26/07/2022 | To construct a 30m multi-user lattice telecommunications support structure, carrying antenna and dishes enclosed within a 2.4 metre high palisade fence compound together with associated ground equipment cabinets and associated site works including new access track and to replace existing gated access. The installation will form part of eir mobile telecommunications network. A Natura Impact Statement (N.I.S.) will accompany the planning application. |

## 2.1 Description of Aspects of the Environment likely to be affected by the project

The most significant possible negative impacts on the environment, without appropriate mitigation measures in place, are likely to be:

- Construction traffic contributing to traffic congestion and road safety hazards on the local road network.
- Adverse health and amenity impacts arising from noise and air quality pollution during construction phase.
- Disturbance and habitat loss of fauna, and potential impact on River Barrow and River Nore SAC.
- Possible residential amenity and visual impacts.

These matters have been considered in full as part of the design and assessment of the subject proposal. The following assessments have been prepared, which include detailed proposals for mitigation and monitoring;

- Landscape Design Strategy and Landscaping Proposals.
- Noise Impact Assessment Report.
- AA Screening / Natura Impact Statement, Ecological Impact Assessment Report.
- Site Access Report.
- Construction Methodology Statement for the Substation and Grid Connection.
- Landscape and Visual Impact Assessment.

## 2.2 Expected Residues/Emissions/Production of Waste

It is expected that there will be some normal residues/emissions during the construction stage. Standard dust and noise prevention reduction measures as per the majority of planning applications of all scales will be employed and monitored. As such, pollution and nuisances are not considered likely to have the potential to cause significant impacts on the environment. Construction will be guided by a Construction and Environment Management Plan. There will be some waste produced in the construction of the proposed scheme, but this will be subject to normal controls. This will be disposed of using licensed waste disposal facilities and contractors. The scale of the waste production in conjunction with the use of licensed waste disposal facilities and contractors does not cause concern for likely significant impacts on the environment.

At operational stage, there are no significant mitigations measures or methods proposed other than best practice management of the infrastructure. The only waste to be produced during the operational phase will be wastewater, with a 5m3 foul holding tank emptied periodically by a licensed contractor.

## 2.3 Use of Natural Resources – Soil/Land/Water/Biodiversity

There will be no significant likely impacts on the environment in relation to natural resources in the area. The main use of natural resources will be land. The substation and grid connection are

permanent uses on land, with the solar array infrastructure for Ballyloo Solar Farm, Park Solar Farm and Ballybannon Solar Farm temporary uses in the landscape. The scale of natural resources used both in construction and operation is not such that would cause concern in terms of significant likely impacts on the environment.

As outlined in the prepared Appropriate Assessment Screening / Natura Impact Statement, there is no likelihood of adverse impacts on the nearest European sites following implementation of proposed mitigation measures.

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# Assessment of EIA Requirement

## 3.1 Schedule 5 Criteria

Article 93 and Schedule 5 of The Regulations set out the classes of development for which a planning application must be accompanied by an Environmental Impact Assessment Report (EIAR).

Part 1 and Part 2 Schedule 5 of The Regulations defines the categories and thresholds of developments requiring EIA.

### 3.1.1 Schedule 5 'Part 1' Projects

Solar farms are not a project type in Schedule 5 'Part 1'. The most relevant energy related project types are set out below with corresponding commentary:

> *2(a) A thermal power station or other combustion installation with a heat output of 300 megawatts or more.*

220kV / 110kV substations or underground cable grid connections or solar farms do not meet the definition of a thermal power station or combustion installation. Therefore, this project type is not applicable.

> *(20) 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 propose any new overhead lines. Therefore, this project type is not applicable.

There are no other project types identified in Schedule 5 'Part 1' which relate either directly or indirectly to solar farms, 220kV substations or underground electrical cables. It is clear therefore that the development is not a project type with regard to 'Part 1' and does not therefore require a mandatory EIA.

The subject proposal does not come under any of the stipulated categories contained in Part 1.

### 3.1.2 Schedule 5 'Part 2' Projects

Under Schedule 5 - Part 2 the following project types have been assessed to determine applicability to the proposed development:

> *3(a) Industrial installations for the production of electricity, steam and hot water not included in Part 1 of this Schedule with a heat output of 300 megawatts or more.*

220kV / 110kV substations or underground cable grid connections or solar farms do not meet the definition of an industrial installation as per the meaning of 3(a).

> *3(b) 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.*

220kV / 110kV substations or underground cable grid connections or solar farms do not meet the definition of an industrial installation as per the meaning of the 3(b).

*3(i) Installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts.*

220kV / 110kV substations or underground cable grid connections or solar farms do not meet the definition of a wind farm.

*10(a) Industrial estate development projects, where the area would exceed 15 hectares.*

220kV / 110kV substations or underground cable grid connections or solar farms do not meet the definition of industrial estates.

*10(b)(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.*

Solar farms or 220kV / 110kV substations or underground cable grid connections do not meet the definition of an urban development as per the meaning of 10(b)(iv).

*10(b)(dd) All private roads which would exceed 2000 metres in length*

The proposed development will include access tracks comprising of permeable hardcore which does not fall within a road definition as per established planning case law.

The proposed development is not a project type related to any of the above identified 'Part 2' projects and there is therefore no legal requirement to undertake a sub-threshold EIA Screening in respect of these. The legislative basis for this is well established in planning legislation and interpretive case law including (in the specific case of solar farm development) Kavanagh V An Coimisiún Pleanála [2020] IEHC 259, Sweetman V An Coimisiún Pleanála [2020] IEHC 39 and Cummins & Ors v ACP [2025] IEHC 521. It is also a well-established precedent with planning authorities and An Coimisiún Pleanála.

### 3.1.3 Planning and Development (Amendment) (No. 2) Regulations 2023 (S.I. 383 of 2023)

On the 27th July 2023, The Department of Housing, Local Government and Heritage issued circular EUIPR 01/2023 advising of amendment to Part 2 of Schedule 5, to re-insert the project type - Projects for the restructuring of rural land holdings, into the planning code.

*Projects for the restructuring of rural land holdings, undertaken as part of a wider proposed development, and not as an agricultural activity that must comply with the European Communities (Environmental Impact Assessment) (Agriculture) Regulations 2011, where the length of field boundary to be removed is above 4 kilometres, or where re-contouring is above 5 hectares, or where the area of lands to be restructured by removal of field boundaries is above 50 hectares.*

The proposed 220kV / 110kV substations and grid connection development provides for the removal c.30 linear metres of hedgerow at the substation site entrance and c.1 linear metre removed and reinstated under proposed Option A (if advanced) where the cable alignment passes through a field boundary near the Kellis 220kV sub. There is some 32 linear meters of new hedgerow proposed and 15 linear meters of bolstered hedgerow within the project red-line boundary. The application is

accompanied by 3 no. landscape mitigation plans by Macro Works, reflecting the three substation options that may be implemented.

In considering the subject application in combination with the wider solar farm projects, it is proposed to remove 324 metres of hedgerow across the Ballyloo Solar Farm, Park Solar Farm, and Ballybannon Solar Farm. This coupled with the potential 31 linear metres to be removed as part of the subject substation / grid connection (355 linear metres) remains significantly below the identified 4 kilometre threshold.

It is not proposed to re-contour land as part of the solar farm i.e. levelling off hills or infilling of hollows (by removing or shifting earth or rock).

The proposed development does not provide for any removal of field boundaries contributing to restructuring of agricultural land. The submitted plans for the solar farms provide for minor sections of localised hedgerow removal in targeted areas to facilitate access track and the entrance as opposed to any substantive removal of field boundaries. While these elements of minor hedgerow removal are required for the wider solar farm project, they are not required as part of the subject application for the substation component and associated grid connection. The pattern and integrity of the existing field network system will be retained as part of the solar farm project, which represents a temporary use on these lands.

The above interpretation has been corroborated by means of direct engagement with the Department of Agriculture, Food and the Marine who confirmed their view that small focused sections of hedgerow removal is not tantamount to substantive field boundary removal which would materially change the structure of a large farm holding. This point is reinforced in itself by the presence of the 4 kilometre field boundary threshold, which greatly exceeds the 355 metres of removal proposed as part of the wider solar farm project.

Based on the foregoing, the proposed development does not meet any mandatory threshold for EIA. The recent statutory instrument does mean that due to the removal of hedgerow required for the wider solar farm project, the substation is potentially a project type that falls broadly within the scope for sub-threshold EIA Screening. This is completed in Section 4 of this statement.

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# Schedule 7 Screening

## 4.1 Schedule 7 Criteria

Schedule 7 of The Regulations details the criteria the planning authority must consider in determining whether a sub-threshold EIA should be undertaken. This schedule is a direct transposition of Annex III of EU Directive 2011/92/EU. EU Directive 2014/52/EU provides a revised Annex III and its transposition into national legislation is mandatory. Accordingly, the following provides a screening statement of the proposed development against the Annex III criteria of 2014/52/EU.

## 4.2 Construction Phase

| Criteria for assessment of EIA sub-threshold | Impacts during Construction Phase |
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| **1. Characteristics of proposed development The characteristics of the proposed development, in particular:** | |
| The size of the proposed development | The site area of the substation compound is approximately 2.4 hectares within an agricultural field. The associated grid connection extends west from the proposed substation to the existing 220/110 kV Kellis substation principally within the public road, with the potential exception of the final 0.6km of the underground cable route which may be laid across private agricultural lands (Option A in the presented plans), providing for a wider red-line boundary area of 11.6 hectares. The permitted Ballyloo Solar Farm has a site area of c. 180 ha[5]. The proposed substation and grid connection (referred to hereafter as "the proposed development") will be constructed alongside the Ballyloo Solar Farm with a duration of 18 months[6]. It is an unknown at this time, but the Park Solar Farm (c.60ha) and Ballybannon Solar Farm (c.57ha) may be constructed at some point during the construction period for the proposed development. With the exception of the underground cabling for these projects to the subject substation / grid connection, these |

[5] As noted, the RFI layout omitted Parcel 4.
[6] It is envisioned that the Ballyoo Solar Farm project will have a total construction phase of 24 months

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| | solar farms are located north of the M9 national road network, meaning HGV movements will be segregated in part and managed proactively with Carlow County Council.<br><br>The substation / grid connection construction works themselves will be confined to the development site and will be informed by the prepared Construction Method Statement as well as a Construction and Environmental Management Plan (CEMP) for the three solar farm projects to mitigate potential impacts. These works will be guided by appropriate construction, environmental and health and safety measures to ensure no impact to existing populations.<br><br>A total of c. 324 linear metres of hedgerow will be permanently removed throughout the solar farm sites to facilitate site entrance, access tracks and underground cabling. This will be offset 4,356 new linear metres of hedgerow, 25,983 linear metres of bolstered hedgerow, and 36,311 sqm of native woodland.<br><br>No significant impact is likely. |
| The cumulation with other proposed development | This screening assessment has also considered potential cumulative impacts that could arise from the proposed development and wider solar farm project in combination with other known permitted projects in the area. A desktop review of other local projects in the vicinity was undertaken using Carlow County Council's and An Coimisiún Pleanála's planning enquiry systems. There are other permitted projects within 5 km of the subject site and the final contractor developed CEMP will consider these as necessary to manage any interrelated traffic management considerations.<br><br>No significant impact is likely. |
| The Nature of any demolition works | The proposed development does not include any demolition of buildings or other structures. A total of c. 324 linear metres of hedgerow will be permanently removed throughout the solar farm sites to facilitate site entrance, access tracks and underground cabling. This will be offset 4,356 new linear metres of hedgerow, 25,983 linear metres of bolstered hedgerow, and 36,311 sqm of native woodland.<br><br>The wider solar farm projects include some underground cabling in the public road which will be subject to road opening licencing and formal consents from Carlow County Council. The contractor will submit and have agreed a Construction and Environment Management Plan providing details of all construction methods. Best practice guidance in relation to demolition will be adhered to.<br><br>Once constructed, the proposed development will form part of the national electricity network and will be a permanent fixture. A |

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| | Decommissioning and Restoration Plan was prepared and was included with the solar farm applications. It describes how the applicant proposes to restore the proposed solar farm sites to former agricultural use post-operation. It should be noted however that during the decommissioning phase, the substation and grid connection will remain in situ as an ESB Networks / EirGrid asset. This Decommissioning and Restoration Plan provides an overview of the anticipated activities during the decommissioning phase and outlines the measures to address any potential negative environmental effects as a result of these activities. All identified impacts from the decommissioning phase will be less than the construction phase and the final plan will be agreed with Carlow County Council ahead of any decommissioning works.<br><br>No significant impact is likely. |
| The use of natural resources, in particular land, soil, water and biodiversity | Energy, including electricity and fuels, will be required during construction phase. Some soil will be stripped for access tracks. This will be carried out outside of periods of wet weather with appropriate run-off control to be installed and maintained for the duration of the construction phase. Construction will use various raw materials typical of the construction of temporary solar farms which are typically inert in nature.<br><br>There will be no material impact on water resources arising from the construction phase, and the works themselves include bolstering of hedgerows, new planting and other measures in support of positive biodiversity enhancement.<br><br>No out of the ordinary use of natural resources is likely during the construction process.<br><br>No significant impact is likely. |
| The production of waste | Waste will be generated during the construction phase and this will be typical of development of this nature. Handling of waste will be in full accordance with statutory legislation and associated guidance. Soil cut for the creation of the substation compound will be reused on site as part of the formation of berms and landscaping.<br><br>In relation to the wider solar farm, waste produced at decommissioning stage will be less than the construction stage with all components of the development re-used or recycled as much as reasonably practicable. Residual disposal will be to a licenced facility.<br><br>No significant impact is likely. |

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| Pollution and nuisances | Development of site will increase traffic in the area for the duration of the construction phase. Temporary noise, dust and vibration impacts, as well as any potential for water pollution, have been addressed in the various technical assessments including the Planning and Environmental Statement, Traffic and Access Report, Natura Impact Statement, Noise Impact Assessment, and Ballyloo Substation and Grid Connection Construction Methodology Statement.<br><br>No significant impact is likely. |
| The risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge | No significant risks on the proposed development site are foreseen, subject to strict compliance with standard environmental controls. The proposed development is not subject to the Seveso Directives or COMAH Regulations.<br><br>The nature and location of the project means that there is no risk of a major accident or disaster.<br><br>No significant impact is likely. |
| The risk to human health (for example due to water contamination or air pollution) | Additional noise and dust from temporary construction works may be experienced by residents and other property users in the vicinity. This can be effectively managed, having regard to the nature of the project and measures proposed in the Ballyloo Substation and Grid Connection Construction Methodology and Construction and Environmental Management Plan for the solar farms. On completion of works, noise and dust levels will return to background levels. The design includes focused water control measures to ensure that run-off of sediment or other pollutants will not enter watercourses therefore the proposed project will not have any impact on water quality. In addition, it should be noted that there is no risk to drinking water supplies associated with the local public water supply scheme which is regulated by the Environmental Protection Agency.<br><br>No significant impact is likely. |
| **2. Location of proposed development<br>The environmental sensitivity of geographical areas likely to be affected by proposed development, having regard to:** | |
| The existing land use | The substation site is currently in agricultural use, as are the wider solar farm lands, and collectively they represent an agricultural diversification project consistent with this land use. The development of the proposed substation and grid connection is necessary to facilitate this.<br><br>During the construction phase there will be short-term disruption to the existing land use for both the substation and the solar array |

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| | components. The solar farm grassed fields will be reseeded post the construction phase.<br><br>No significant impact is likely. |
| The relative abundance, quality and regenerative capacity of natural resources in the area | Based on the ecological surveys, the results of which are presented in the EcIA, the wider project site is currently considered to be of 'local importance' as it contains some semi-natural habitat such as trees, with the site of the substation (c.2.4ha) comprising lower value arable crop habitat. Outside of a short section within arable crops (BC1) habitat within the substation site, the proposed grid connection route is located completely within the corridor of the public road (buildings and artificial surfaces habitat BL3). improved agricultural grassland.<br><br>The collective solar farm projects include focused measures to foster and regenerate biodiversity development across the subject site. This includes the development of biodiversity corridors and creation of riparian enhancement zones. Significant hedgerow bolstering and new planting is proposed A total of c. 324 linear metres of hedgerow will be permanently removed throughout the solar farm sites to facilitate site entrance, access tracks and underground cabling. This will be offset 4,356 new linear metres of hedgerow, 25,983 linear metres of bolstered hedgerow, and 36,311 sqm of native woodland.<br><br>The site is not located within any statutory designated area. A Natura Impact Statement prepared by Ecology Ireland has been prepared in respect of designated Natura 2000 sites. This report has actively considered the potential for adverse impacts on qualifying interests, arising from the construction phase and proposed mitigation measures.<br><br>No significant impact is likely. |
| The absorption capacity of the natural environment, paying attention to the following areas:<br>• wetlands,<br>• coastal zones,<br>• mountain and forest areas,<br>• nature reserves and parks,<br>• areas classified or protected under legislation, including special protection areas designated pursuant to Directives 79/409/EEC and 92/43/EEC,<br>• areas in which the environmental quality standards laid down in | The construction phase will not interfere with or result in impacts to any of the following;<br>▪ wetlands,<br>▪ coastal zones,<br>▪ mountain and forest areas,<br>▪ nature reserves and parks,<br>▪ areas classified or protected under legislation, including special protection areas designated pursuant to Directives 79/409/EEC and 92/43/EEC,<br>▪ areas in which the environmental quality standards laid down in legislation of the EU have already been exceeded,<br>▪ densely populated areas,<br>▪ landscapes of historical, cultural or archaeological significance. |

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| legislation of the EU have already been exceeded,<br>• densely populated areas,<br>• landscapes of historical, cultural or archaeological significance | Appropriate buffers have been incorporated into the design to ensure the protection of water courses.<br><br>A Natura Impact Statement has been prepared to actively consider the potential for adverse impacts on qualifying interests of the Natura 2000 sites in proximity, arising from the construction phase. No operational impacts have been identified. The findings of the report have determined that subject to identified mitigation measures no significant adverse impacts arising from the construction of the proposed development will occur in relation to Natura 2000 sites.<br><br>The Archaeological, Architectural and Cultural Heritage Impact Assessment concludes there will be no adverse impact on any heritage assets during construction and operation of the development.<br>The prepared Landscape and Visual Impact Assessment (LVIA) confirms that the proposed development is not considered to give rise to any significant residual visual impacts.<br><br>Best practice standards, environmental guidelines measures will be adhered to during the construction phase in order to avoid potential impacts on natural resources and likely significant impacts are not anticipated.<br><br>The site is not located in proximity to densely populated areas. Any interaction with the existing population can be effectively managed, having regard to the nature of the project and measures proposed in the Construction and Environmental Management Plan. On completion of works, noise and dust levels will return to background levels.<br><br>No significant impact is likely. |
| **3. Types and Characteristics of potential impacts**<br>**The potential significant effects of proposed development in relation to criteria set out under paragraphs 1 and 2 above, and having regard in:** | |
| The magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected) | There is the potential for a localised impact on traffic volumes and flows along the construction delivery route and in the immediate vicinity of the site. A Site Access Study accompanies this application, and a pre-commencement Construction Traffic Management Plan will be put in place to mitigate negative impacts on local traffic flow. Unmitigated, there is the potential for localised disruption due to noise and dust issues etc, but this will be managed in full accordance with best practice environmental standards. The subject site is in a local rural area where the |

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| | population is not large but protection of the amenity of local residents has been considered in full as a foremost project matter.<br><br>The spatial extent of the substation, grid connection and wider solar farm has been assessed from a landscape and visual perspective and will not have any adverse impact on the local environment.<br><br>No significant impact is likely. |
| The nature of the impact | Potential for the environment to be impacted negatively during the construction phase by way of traffic disruption, noise and dust issues etc. Any impacts will be localised and temporary in nature and are not deemed to be significant. These will be proactively managed via standard environmental protection measures.<br><br>No significant impact is likely. |
| The transboundary nature of the impact | The proposed substation / grid connection and wider solar farm project is contained wholly in the county of Carlow. It does not have potential for transboundary impacts given its location and the nature of the proposed development.<br><br>No significant impact is likely. |
| The intensity and complexity of the impact | The intensity and complexity of the construction phase is in keeping with modern construction projects. Construction of substation and solar farms is not a complex activity in the context of other energy or renewable projects.<br><br>No significant impact is likely. |
| The probability of the impact | Some level of construction impacts is highly probable, but these will be mitigated by standard best practice techniques identified in the Ballyloo Substation and Grid Connection Construction Methodology, and Construction and Environmental Management Plans for the wider solar farm projects.<br><br>No significant impact is likely. |
| The expected onset, duration, frequency and reversibility of the impact. | The construction phase of the development is expected to commence within approximately 3 years of any grant of permission and extend for a duration of 24 months. As set out in the submitted Planning and Environmental Statement, this period could change owing to matters outside the control of the applicant. Any impacts will be short-term and restricted by planning conditions in terms of the hours of operation. No permanent negative impacts are anticipated as a result of the construction phase of the project.<br><br>No significant impact is likely. |

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| The cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment. | The potential for construction impacts with other projects have been considered in full. There are other permitted solar farms in proximity to the site. This will be considered, if necessary, as part of the pre-commencement Construction and Environmental Management Plan and the potential for such unforeseen impacts will be mitigated accordingly as part of focused response measures.<br><br>No significant impact is likely. |
| The possibility of effectively reducing the impact | There is a strong possibility of reducing potential impacts arising from the construction phase through appropriate project management and the application of identified best practice construction and environmental protection methods. The detailed Ballyloo Substation and Grid Connection Construction Methodology, Construction and Environmental Management Plan for the wider solar farms and associated documents will function as a proactive toolkit to significantly reduce the potential for adverse impacts.<br><br>No significant impact is likely. |

## 4.3 Operational Phase

| Criteria for assessment of EIA sub-threshold | Impacts during Operational Phase |
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| **1. Characteristics of proposed development**<br>**The characteristics of the proposed development, in particular:** | |
| The size of the proposed development | The site area of the substation compound is approximately 2.4 hectares within an agricultural field. The associated grid connection extends west from the proposed substation to the existing 220/110 kV Kellis substation Kellis 220kV principally within the public road, with the potential exception of the final 0.6km of the underground cable route which may be laid across private agricultural lands (Option A in the presented plans), providing for a wider red-line boundary area of 11.6 hectares. The permitted Ballyloo Solar Farm has a site area of c. 180 ha[7], |

[7] As noted, the RFI layout omitted Parcel 4.

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| | with the Park Solar Farm (c.60 ha[8]) and Ballybannon Solar Farm (c.57ha) on the northern side of the M9. The substation options have been designed to EirGrid size and specification requirements, and as such, are consistent with other substations in terms of scale.<br><br>A total of c. 324 linear metres of hedgerow will be permanently removed throughout the solar farm sites to facilitate site entrance, access tracks and underground cabling. This will be offset 4,356 new linear metres of hedgerow, 25,983 linear metres of bolstered hedgerow, and 36,311 sqm of native woodland.<br><br>Collectively, the size and design of the project will deliver significant positive benefits relative to the 'do-nothing' scenario providing for renewable energy development in an area where solar farms have previously been considered to be acceptable.<br><br>No significant impact is likely. |
| The use of natural resources, in particular land, soil, water and biodiversity | The land use in the area of the proposed substation will change from agriculture to utility use. This is considered to be a positive evolution of this small land parcel in support of the creation of clean renewable energy.<br><br>The fields under the solar panels will be reseeded for the operational phase with no impact on land or soil resource.<br><br>Once operational the proposed development and wider solar farms will be unmanned, with the exception of occasional operational visits. The substation will be supported by potable water from a bored well on site. Sanitary facilities will be infrequently used and will discharge to holding tanks. No out of the ordinary use of natural resources is likely during the operational phase.<br><br>The proposed development includes focused measures to foster biodiversity development across the subject site including the creation of species diverse wild flower berms appropriately managed to attract pollinators, invertebrates and bird species; bolstering of existing and planting of new hedgerows as biodiversity corridors providing food sources, nesting sites and allowing connectivity throughout the site for different species; and the seeding of margins across the site with wildflower mix in accordance with the Bride (EU Life Project), increasing biodiversity |

[8] Following omission of Parcel 1 as per decision of Carlow County Council.

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| | across the perimeter of the project as opposed to improved and managed grassland margins. Only native tree and shrub species suited to the locality will be used in the final landscaping plan.<br><br>No significant impact is likely. |
| The production of waste | During the operational phase wastewater related to the substation will be the only waste produced on site. Welfare facilities will be infrequently used, discharging to holding tanks for offsite removal by a licenced contractor.<br><br>No significant impact is likely. |
| Pollution and nuisances | During the operational phase the solar farms will generally be unmanned, with the exception of occasional operational visits. Traffic generated on local roads arising from these visits will be minimal and less than current HGV/agri-plant trips generated by agricultural activities on the subject lands.<br><br>Once operational the substation will emit noise associated with a typical substation of this nature, with the transformer being the main source of noise generation. It has been demonstrated that noise from project inclusive of the substation will be well within allowable limits. The functioning surface water network and sanitary system will be subject to routine monitoring and maintenance.<br><br>The Landscape and Visual Impact Assessment (LVIA) produced by Macro Works that accompanies this application concludes that the proposed development will not give rise to any significant residual visual impacts.<br><br>No significant impact is likely. |
| The risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge | In view of the nature of the operation type no negative impacts are foreseen, subject to strict compliance with standard environmental controls. The proposed development is not subject to the Seveso Directives or COMAH Regulations. The nature and location of the project means that there is no risk of a major accident or disaster.<br><br>No significant impact is likely. |
| The risk to human health (for example due to water contamination or air pollution) | High voltage equipment will be contained within the substation compound and the design and operation of same is well understood in accordance with ESB Network as well as other international standards. Security fencing will be erected to prohibit unauthorised access and |

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| | warning notices will be erected to ensure no safety issues should arise.<br><br>The location of the substation and noise generating plant in a setback position from the public road and local residences means that any audible noise during the operational phase will be well within allowable limits.<br><br>The solar panels themselves are passive installations with no risk to human health. There are no health issues associated with the proposed development of a substation, grid connection and solar farm. The project will be enclosed with security fencing.<br><br>The design includes focused water control measures to ensure that run-off of sediment or other pollutants will not enter watercourses therefore the proposed project will not have any impact on water quality. In addition, it should be noted that there is no risk to drinking water supplies associated with the local public water supply scheme which is regulated by the Environmental Protection Agency.<br><br>It is considered that this proposal has the potential to have a long-term beneficial impact on human health as a consequence of facilitating renewable energy development and reducing reliance on fossil fuels which are damaging to the environment and human health.<br><br>No significant impact is likely. |
| **2. Location of proposed development**<br>**The environmental sensitivity of geographical areas likely to be affected by proposed development, having regard to:** | |
| The existing land use | The proposed substation component will result in the permanent loss of agricultural land, however this will be positively offset by the generation of renewable energy and enhanced biodiversity delivered by means of proposed landscaping measures.<br><br>The wider solar farms represents an agricultural diversification project on agricultural land which is compatible with the existing land use. A temporary use in the landscape, the solar farms will be consolidated within the existing established field network structure on the subject farmlands. A total of c. 324 linear metres of hedgerow will be permanently removed throughout the |

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| | solar farm sites to facilitate site entrance, access tracks and underground cabling. This will be offset 4,356 new linear metres of hedgerow, 25,983 linear metres of bolstered hedgerow, and 36,311 sqm of native woodland.<br><br>No significant impact is likely. |
| The relative abundance, quality and regenerative capacity of natural resources in the area | Based on the walkover by the project ecologist, the wider project sites are currently considered to be of lower to higher value local importance. The area of the proposed substation comprises entirely of arable crop habitat (lower value). The underground cabling grid connection route is predominantly contained within the existing public road, with a small potential area in grassland at the end of the route towards the 220/110kV substation. The collective projects includes focused measures to foster and regenerate biodiversity development across the subject site, which are outlined in the prepared Landscape Mitigation and Biodiversity Management Plans for the subject proposal. This includes the development of biodiversity corridors and formation of berms which will be seeded and maintained as species diverse meadows.<br><br>A total of c. 324 linear metres of hedgerow will be permanently removed throughout the solar farm sites to facilitate site entrance, access tracks and underground cabling. This will be offset 4,356 new linear metres of hedgerow, 25,983 linear metres of bolstered hedgerow, and 36,311 sqm of native woodland.<br><br>The site is not located within any statutory designated area. A Natura Impact Statement prepared by Ecology Ireland has been prepared in respect of designated Natura 2000 sites. This report has actively considered the potential for adverse impacts on qualifying interests, arising from the operational phase.<br><br>No significant impact is likely. |
| the absorption capacity of the natural environment, paying attention to the following areas:<br>• wetlands,<br>• coastal zones,<br>• mountain and forest areas,<br>• nature reserves and parks,<br>• areas classified or protected under legislation, including special protection areas designated pursuant | The operation of the substation, grid connection and solar farm will not interfere with or result in impacts to any of the following;<br>▪ wetlands,<br>▪ coastal zones,<br>▪ mountain and forest areas,<br>▪ nature reserves and parks,<br>▪ areas classified or protected under legislation, including special protection areas designated |

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| to Directives 79/409/EEC and 92/43/EEC,<br>• areas in which the environmental quality standards laid down in legislation of the EU have already been exceeded,<br>• densely populated areas,<br>• landscapes of historical, cultural or archaeological significance | pursuant to Directives 79/409/EEC and 92/43/EEC,<br>▪ areas in which the environmental quality standards laid down in legislation of the EU have already been exceeded,<br>▪ densely populated areas,<br>▪ landscapes of historical, cultural or archaeological significance<br><br>The site is not located within any statutory designated area. A Natura Impact Statement has been prepared to actively consider the potential for adverse impacts on qualifying interests, arising from the construction phase. The findings of the report have determined that subject to identified mitigation measures no significant adverse impacts arising from the construction of the proposed development will occur in relation to Natura 2000 sites. The proposed development will actually decrease the levels of siltation / run-off from the subject site to watercourses / designated sites when compared with the 'do nothing' scenario.<br><br>The design of the substation has incorporated buffer zones around drains and watercourses in order to protect local water quality and that of downstream designated sites.<br><br>The Archaeological, Architectural and Cultural Heritage Impact Assessment concludes there will be no adverse impact on any heritage assets. The prepared Landscape and Visual Impact Assessment (LVIA) confirms that the proposed development is not considered to give rise to any significant residual visual impacts.<br><br>Best practice standards, environmental guidelines measures will be adhered to during the operations / maintenance phase, including adherence with any applied planning conditions during the construction phase in order to avoid potential impacts on natural resources and likely significant impacts are not anticipated.<br><br>Any interaction with the existing population has been considered proactively as part of project design, with the substation compound c.152 metres to the nearest existing residential property to the west.<br><br>No significant impact is likely. |
| **3. Characteristics of potential impacts**<br>**The potential significant effects of proposed development in relation to criteria set out** | |

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| **under paragraphs 1 and 2 above, and having regard in:** | |
| The magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected) | The site area of the substation compound is approximately 2.4 hectares within an agricultural field. The associated grid connection in the public road extends the red-line boundary to 11.6 hectares. The Ballyloo Solar Farm application lands are c. 180.4 hectares, with the Park Solar Farm (c.60ha) and Ballybannon Solar Farm (57ha) are located in a semi-rural area in Co. Carlow.<br><br>The project will be consolidated within the existing agricultural field network, utilising and bolstering the existing pattern of hedgerow boundaries. The spatial extent of any operational impact will be local and potentially visual in nature.<br><br>A landscape and visual assessment has been prepared for the proposal. This has directly influenced the design. The findings confirm that on balance the development will not give rise to any adverse effects from the selected viewpoint locations.<br><br>A separate noise report have been commissioned for the solar farm projects, the findings of which confirm that there will be no significant operational impacts on the population in the local area.<br><br>A total of c. 324 linear metres of hedgerow will be permanently removed throughout the solar farm sites to facilitate site entrance, access tracks and underground cabling. This will be offset 4,356 new linear metres of hedgerow, 25,983 linear metres of bolstered hedgerow, and 36,311 sqm of native woodland.<br><br>No significant impact is likely. |
| The nature of the impact | Expected benefits to physical, micro and macro environments fostering the envisaged growth of renewable energy production and security of supply in Carlow and the wider region. The effects will be positive in nature.<br><br>No significant impact is likely. |
| The transboundary nature of the impact | The proposed substation, grid connection development and wider solar farms project is contained wholly in the county of Carlow. It does not have potential for transboundary impacts given its location and the nature of the proposed development.<br><br>No significant impact is likely. |

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| The intensity and complexity of the impact | A temporary use in the landscape, the proposed solar farms development, by its nature will be of low intensity and the complexity and impact of the development will be moderate and will be actively managed. The substation is not a complex project to construct and such infrastructure are commonplace in rural areas in support of transmission network.<br><br>No significant impact is likely. |
| The probability of the impact | The operational phase will change the local environment to some degree. Focused measures are in place to avoid, reduce, or mitigate any likely negative impacts.<br><br>No significant impact is likely. |
| The expected onset, duration, frequency and reversibility of the impact. | Once constructed, the proposed substation/grid connection will be permanent and non-reversible. The different solar panels components represents a temporary use in the landscape which is fully reversible.<br><br>No significant impact is likely. |
| Cumulation of the impact with the impact of other existing and/or approved projects. | The potential for operational impacts with other permitted local projects has been considered in full. It has been demonstrated that no cumulative impacts will arise as part of the operational development.<br><br>No significant impact is likely. |
| The possibility of effectively reducing the impact | The proposed substation / grid connection is being shaped by a number of proactive design measures to reduce the potential for any negative impacts. There is a strong possibility of reducing such potential impacts as it relates to the operational development.<br><br>It has been objectively concluded that the proposed substation and wider solar farm project will provide for long-term beneficial impacts of varying degrees, which includes renewable energy development and biodiversity gain. The collective project will support the decarbonisation of fossil fuel electricity generation in Ireland. This is a positive environmental and health impact in terms of the removal of mass emissions of carbine dioxide, nitrogen oxides, sulphur dioxides and dust from the atmosphere.<br><br>No significant impact is likely. |

## 4.4 Decommissioning Phase

As referenced in a number of sections above, this screening statement has also actively considered the decommissioning phase of the wider solar farms which the subject substation / grid connection will support. The solar farm is considered to be temporary in nature, with an operational lifetime of 40 years. In the event that the solar farms are decommissioned at the end of this period, it is envisaged that the substation may remain in situ as valuable functioning infrastructure on the national electricity transmission network subject to appropriate land agreements. As such, and in the event of a grant of planning permission, it is requested that the operational life of the substation not be time limited by means of an imposed planning condition.

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# Conclusion

## 5.1 Summary

Part 1 and Part 2 of Schedule 5 of The Regulations defines the categories and thresholds of development that require EIA.  The proposed substation and grid connection, as well Ballyloo, Park and Ballybannon Solar Farms are not of a type identified in Part 1 of Schedule 5, nor does it meet any prescribed thresholds for mandatory EIA under Part 2. The recent statutory instrument S.I. 383 of 2023 does mean that the solar farm projects are now a project type that potentially falls within scope for sub-threshold EIA Screening.

Based on the information provided in accordance with Annex IIA and Annex III of the 2014 Directive, it is considered that a sub-threshold EIA is not required for the proposed development, as adequate measures are in place to avoid, reduce or mitigate likely impacts, such that neither the construction nor operational, nor decommissioning phases of the overall developments will have a significant negative impact on the environment. The application is accompanied by focused technical reports across various disciplines which confirm no significant environmental impacts, findings which are reflected in this EIA Screening.


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Accreditations
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018