Central Dublin Substation Project

EIA Screening Report

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Central Dublin
Substation Project
S5 P01
July 2025

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Contents

Figures

1 Introduction

RPS has been commissioned by EirGrid plc (hereafter EirGrid) to prepare this Report to ascertain whether or not the proposed Central Dublin Substation Project (hereafter referred to as the "Proposed Development") is a type of development that requires a mandatory Environmental Impact Assessment (EIA). The location of the Proposed Development is shown in **Figure 2.1**.

The Proposed Development involves building a new transmission substation in Central Dublin. Also considered for the purposes of this report is the Grid Connection which does not form part of the subject planning application. Transmission substations are interface points between the Transmission System and Distribution System. The driver of these projects is security of supply. The need for investment relates to a lack of capacity at existing transmission substations and transmission circuits to supply the increased demand that the Distribution System Operator has forecast.

This report presents the information required to inform the determination on the requirement for EIA to be made by the Competent Authority.

1.1 Applicant Details

EirGrid is the State-owned electric power transmission operator. It is a public limited company, registered under the Companies Acts. EirGrid was established to act as the independent Transmission System Operator (TSO), in line with the requirements of the EU Electricity Directive. EirGrid became operational as the TSO on 1 July 2006.

Pursuant to provisions of SI No 445/2000 - European Communities (Internal Market in Electricity) Regulations, 2000 (as amended), EirGrid has the exclusive function to operate and ensure the maintenance of and if necessary, develop a safe, secure, reliable, economical, and efficient transmission system.

As TSO in Ireland, EirGrid's statutory role is as follows:

- Develop, ensure maintenance and operate a safe, secure, reliable, economical and efficient national electricity grid with due regard for the environment.
- Plan and develop the grid infrastructure needed to support Ireland's economy.
- Supervise the security of the national grid.
- Schedule electricity generation with power generators and stations.
- Facilitate the market for renewable electricity in Ireland.

As TSO, EirGrid is regulated by the Commission for Regulation of Utilities (CRU).

EirGrid, as the Transmission System Operator (TSO) of Ireland, and ESB Networks, as the Distribution System Operator (DSO) and Transmission Asset Owner (TAO) of Ireland, work collaboratively to ensure that the needs of transmission and distribution connected customers are met. This includes planning the development of transmission interface stations. A transmission interface station or transmission substation is a point of connection between the transmission and distribution system. A primary function of these stations is to facilitate power flows between the transmission and distribution systems to enable power to be distributed to where it is needed.

As part of feedback collected during the *Shaping our Electricity Future* consultation, the DSO has highlighted to EirGrid emerging needs for additional capacity at transmission interface stations in the Dublin area. This capacity is needed to accommodate forecast growth of electricity demand in the distribution network. This projected demand growth is driven by several factors including residential, electrification of heat and transport and growth in commercial sectors.

The significant electricity demand growth in the distribution system also leads to a significant pressure on the transmission system, particularly at existing transmission substations and the

associated transmission circuits. The existing transmission substations and the associated transmission circuits are at risk of reaching their capacity limits and as a result the existing infrastructure will not be capable to supply sufficient power to where it is needed. To address this need, new infrastructure is required.

Since publication of the original Shaping Our Electricity Future v1.0 Roadmap in 2021[1], the emerging needs have translated into connection requests made by the DSO to the TSO. Currently there are three projects underway to deliver new transmission substations, one each in North County Dublin, West County Dublin, and Dublin Central.

The focus of this report is the Central Dublin Substation Project. Further details on the project are provided in **Section 2** of this report.

[1] The latest version of Shaping Our Electricity Future Roadmap is v1.1, published in 2023. Available at https://cms.eirgrid.ie/sites/default/files/publications/Shaping-Our-Electricity-Future-Roadmap_Version-1.1_07.23.pdf

2 Project Description

2.1 Overview of Proposed Project

Due to the ageing of Dublin's electricity infrastructure, the Powering Up Dublin Programme has been introduced as a means to strengthen key electricity infrastructure in Dublin and the surrounding area, making the city 'renewable ready'. Powering Up Dublin requires the installation of five routes for high voltage underground cables to replace older cables, as well as substation upgrades and the construction of a new electricity transmission substation in Central Dublin.

Dublin City Centre currently gets its power from existing transmission substations in Finglas, Ringsend and Inchicore. It is projected that these existing transmission stations will reach their capacity limits in the coming years. Because of this, there is a need for a centrally located substation to support Dublin's growing electricity needs.

As part of the Powering Up Dublin programme, a new 220kV/110kV Gas Insulated Substation (GIS) has been identified as the best solution to address the city's growing electricity demand. This GIS will be looped into one of the existing 220 kV circuits in the North Inner City. The new station will support:

- Residential housing and commercial developments in the City Centre area;
- Demand growth due to electrification of heat and transport;
- Improve security of supply in the City Centre; and
- Bringing renewable energy on to the grid.

The suitability of multiple potential sites were explored during Step 3 of EirGrid's Framework for Grid Development[2]. The Step 3 (Preferred Options) Report[3] identified the Emerging Best Option (EBO) through a Multi-Criteria Analysis (MCA) process. This evaluation considered technical feasibility, deliverability, economic factors, socio-economic impacts, and environmental considerations across six potential locations. Following the MCA, Location 1 emerged as the Emerging Best Option (EBO) to progress to Step 4 for further assessment and analysis and ultimately to be brought forward to planning as the Proposed Development in Step 5.

2.2 Proposed Development

The1.124ha subject site at the ESB Gateway Car Park and adjoining lands, East Wall Road, East Wall, Dublin 3 is within the ownership of ESB and comprises of a temporary surface car park for ESB Networks staff, and an adjacent vacant brownfield site on the north side of East Wall Road (R131 regional road). A strip of land along the East Wall Road footpath, and within the control of Dublin City Council, also forms part of the SID planning application boundary.

the residential area of East Wall is located immediately to the southwest of the site and generally comprises two storey residential dwellings. The site is bounded to the west by the Portside Business Centre, to the east by a Dublin Port Company (DPC) Storage Site, to the north by the M50 and Port Tunnel Control building and Tolling facility.

The Eastpoint Business Park lies immediately to the north of the M50 and Port Tunnel which consists of numerous office buildings with access to the Business Park from two security-controlled access points from Alfie Byrne Road and Bond Road. Further afield to the northwest of the

[2] The six stage process is outlined in the EirGrid document "Have your say" available at: https://cms.eirgrid.ie/sites/default/files/publications/EirGrid-Have-Your-Say-%28Final-Version%29.pdf
[3] Presented during the Step 3 Consultation, available at: https://cms.eirgrid.ie/sites/default/files/publications/CP1273-RPS-01-RN-XX-R-C-0002_Step_3_Report_Dublin_Central_BSP_S4_P01.pdf

application site, the River Tolka flows out into the Dublin Bay Estuary. The M50 crosses the river near the estuary before entering the port tunnel.

The location is approximately 50m south from the Belcamp – Shellybanks 220 kV circuit which currently runs on the northern side of the M50.

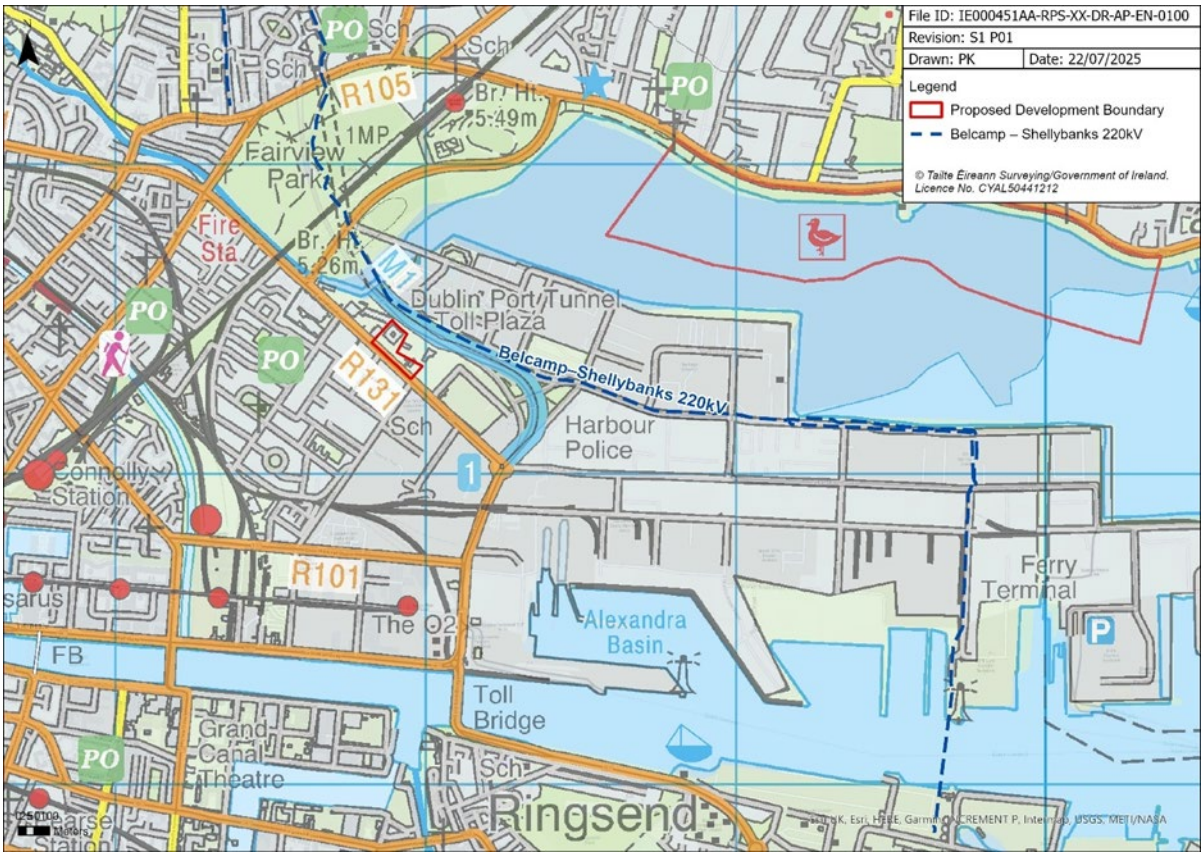

Figure 2.1: Site Location

The Proposed Development comprises of:

- Change of use from car park to electricity infrastructure;
- Demolition of existing buildings, structures and general site clearance;
- 1 no. 2-storey 220kV Gas Insulated Switchgear (GIS) substation building occupying an area of c. 51.8m x 22.2m and 20m in height to include the GIS switchgear comprising of insulated circuit breakers, disconnectors and other high voltage equipment, an emergency diesel generator, all necessary welfare facilities, office spaces, and monitoring and control equipment required for the operation and maintenance of the substation;
- 1 no. 2-storey 110kV GIS substation building occupying an area of c. 51m x 15.9m and 16.5m in height to include the GIS switchgear comprising of insulated circuit breakers, disconnectors and other high voltage equipment, an emergency diesel generator, all necessary welfare facilities, office spaces, and monitoring and control equipment required for the operation and maintenance of the substations;
- 3 no. transformers to transform electrical power from 220kV to 110kV and associated acoustic enclosures (c. 5.3m in height) and c 1m high lightning protection rods extending to a height of c. 11m above ground level;
- Electrical cables located within the site boundary;
- Site lighting within the substation compound;

- Closure of all existing entrances to the site and the provision of new vehicular and pedestrian access from East Wall Road;
- Ancillary car parking spaces including internal access roads;
- 2.6 m high palisade security fence and associated gates;
- A public-facing fence and associated gates along East Wall Road varying in height from c. 2.4m to c. 3m;
- Public realm improvements including the provision of seating areas and landscaping;
- Associated utility connections including water supply, foul drainage and surface water drainage, including the provision of an underground storm water attenuation tank; and
- All other associated ancillary above and below ground development, including works comprising or relating to construction works, roadworks and excavation.

The proposed substation will tie into the existing Belcamp – Shellybanks 220 kV circuit which runs along the northern side of the M50 motorway. The proposed substation will connect into this 220 kV circuit via a trenchless crossing of the M50. This Grid Connection does not form part of the proposed SID planning application, however although not part of the application it has been considered within this screening report.

A layout of the Proposed Development is provided in **Figure 2.2**.

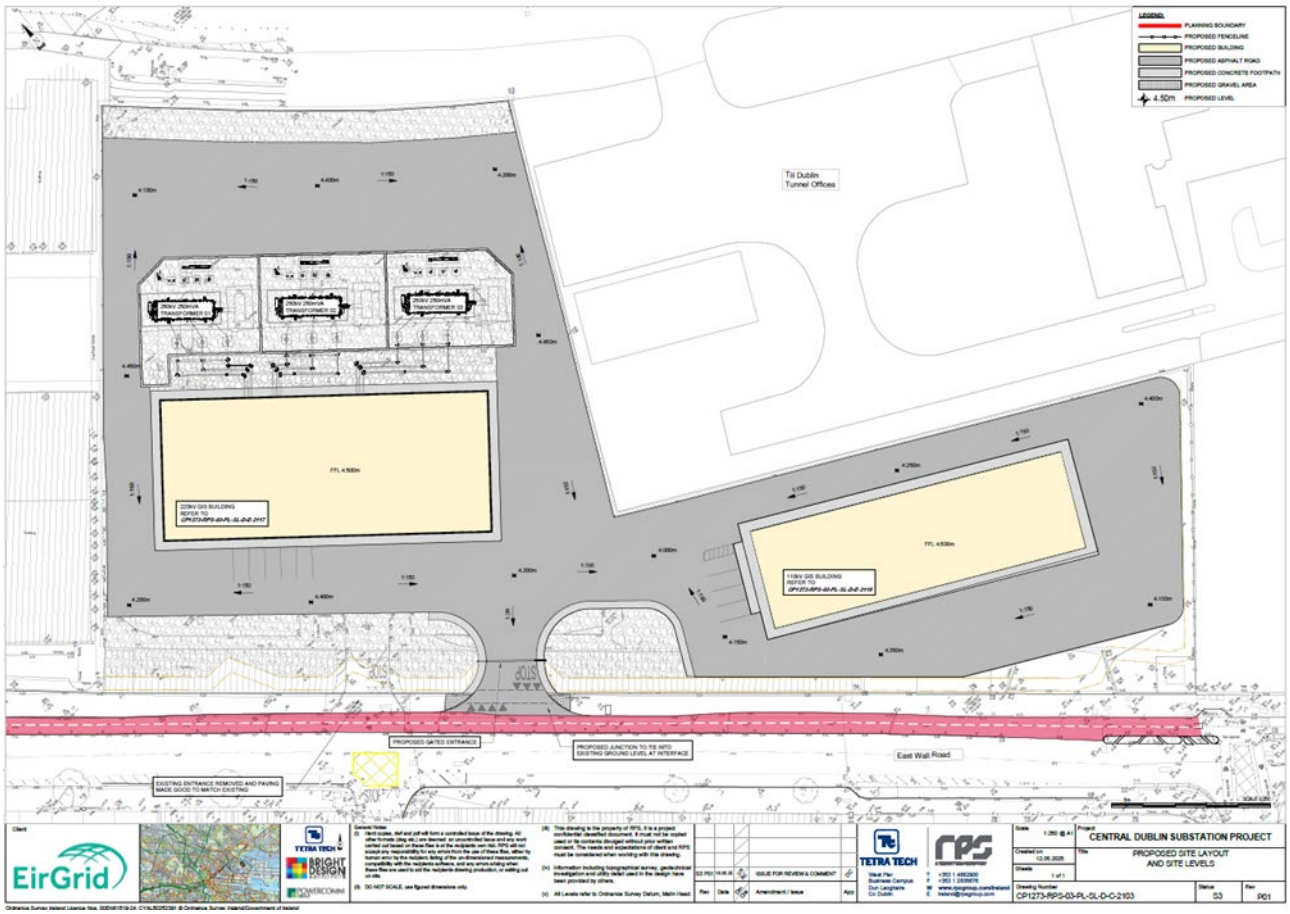

Figure 2.2: Proposed Site Layout and Site Levels

3 Requirement for EIA

3.1 EIA Legislation

The requirement for EIA of certain projects was established in the EU Directive (85/337/EEC) as amended by Directive 97/11/EC, 2003/35/EC and 2009/31/EC on the assessment of the effects of certain public and private projects on the environment (known as the 'EIA Directive'). The Directive and amendments were codified and replaced by 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment (and as amended in turn by Directive 2014/52/EU).

The EIA Directive was transposed into Irish legislation through a number of statutory provisions including the Planning and Development Act 2000, as amended (hereafter, the PDA), and the Planning and Development Regulations 2001, as amended (hereafter, the PDR).

For the purposes of determining if an EIA is required for a proposed development, the entire project must be considered as a single development i.e. the Proposed Development and Grid Connection.

3.2 Specified Classes of Development Requiring EIA

Section 176 of the PDA gives the Minister the power to make regulations to specify prescribed classes of development for EIA. These prescribed classes of development are set out in Part 1 and Part 2 of Schedule 5 of the PDR as per Regulation 93 of Part 10 of the PDR. Furthermore, Section 172 of the PDA provides the legislative basis for mandatory EIA where any one of the following requirements are met:

- the Proposed Development would be of a Class specified in Part 1 of Schedule 5 of the PDR and it either equals or exceeds a relevant quantity, area or other limit specified in that Part.
- the Proposed Development would be of a Class specified in Part 1 of Schedule 5 of the PDR where no quantity, area or other limit is specified.
- the Proposed Development would be of a Class specified in Part 2 of Schedule 5 of the PDR and it either equals or exceeds a relevant quantity, area or other limit specified in that Part.
- the Proposed Development would be of a Class specified in Part 2 of Schedule 5 of the PDR where no quantity, area or other limit is specified.

If the Proposed Development does not meet any one of the four criteria above, further consideration for EIA is required if the Proposed Development is a class of development specified in Part 2 of Schedule 5 of the PDR but is less than any relevant quantity, area or other limit specified in that Part. This is termed sub-threshold development.

If the Proposed Development does not meet any of the four criteria above and it is not a class of development specified in Part 2 of Schedule 5 of the PDR then a sub-threshold assessment is not required and an EIA is not required.

3.2.1 Part 1 of Schedule 5 of the PDR

The Proposed Development does not meet the description of any of the types of development listed in Part 1 of Schedule 5 of the PDR. Therefore, the Proposed Development is not of a Class specified in Part 1 of Schedule 5 of the PDR and does not require mandatory EIA.

3.2.2 Part 2 of Schedule 5 of the PDR

The following classes of development type listed in Part 2 of Schedule 5 are deemed relevant for consideration in relation to the Proposed Development:

Class of Development 3. Energy Industry

(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.

(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.

The Proposed Development is not of a type as per the meaning of Class 3 (a) or 3(b) as:

- The Proposed Development comprises of substation infrastructure, including the 2 no. GIS substations (including 1 no. 110kV substation and 1 no. 220kV substation), 3 no. transformers and does not meet the definition of an industrial installation as per the meaning of 3(a). A mandatory EIA is not required.
- The Proposed Development comprises of substation infrastructure, including the 2 no. GIS substations (including 1 no. 110kV substation and 1 no. 220kV substation), 3 no. transformers and does not meet the definition of an industrial installation as per the meaning of 3(b). A mandatory EIA is not required.
- The Proposed Development and Grid Connection comprise of the installation of underground electrical cables. There are no overhead cables, which are suspended overhead between pylons or polesets and therefore does not meet the definition of transmission of electrical energy as per the meaning of 3(b), the class being overhead cables and the threshold being the voltage. A mandatory EIA is not required.

Therefore Under Part 2 Item 3 there is no class of development that directly describes the Proposed Development. A mandatory EIA is not required. **Class of Development 10. Infrastructure projects**

(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.*

(In this paragraph, "business district" means a district within a city or town in which the predominant land use is retail or commercial use.)

Under Part 2 Item 10 Infrastructure projects there is no class of development that directly describes the Proposed Development. In addition, the Proposed Development site is 1.124 ha, which is below the thresholds stated in Class 10 (b) (iv) above and accordingly, the thresholds of Class 10(b) (iv) do not apply. A mandatory EIA is not required.

Therefore, the Proposed Development is not of a Class specified in Part 2 of Schedule 5 of the PDR.

3.2.3 Sub-Threshold for Part 2 of Schedule 5 of the PDR

Sub-threshold development is defined in the PDR as a:

> *"development of a type set out in Part 2 of Schedule 5 which does not equal or exceed, as the case may be, a quantity, area or other limit specified in that Schedule in respect of the relevant class of development".*

No element of the Proposed Development falls into a class of development contained in Part 2 of Schedule. As the Proposed Development is not of a Class specified in Part 2 of Schedule 5, it does not meet the definition of sub-threshold development. Therefore sub-threshold screening for EIA is not required.

4 Conclusion

The purpose of this report is to provide the Competent Authority with information on the Proposed Development to allow them to make a determination on the requirement for EIA for the Project. This report concludes the following:

- The Proposed Development comprises development for the purposes of the PDA.
- For the purposes of EIA, the entire project has been considered as a single development i.e. the Proposed Development and Grid Connection.
- The Proposed Development is not of a Class specified in Part 1 of Schedule 5 of the PDR requiring mandatory EIA.
- The Proposed Development is not of a Class specified in Part 2 of Schedule 5 of the PDR requiring mandatory EIA.
- The Proposed Development is not of a Class specified in Part 2 of Schedule 5 of the PDR requiring sub-threshold assessment for EIA.

Therefore:

- Screening for EIA is not required.
- An EIA is not required.