Belmayne 110kV/38MW Distribution Substation Planning and Environmental Report

Submission to: An Coimisiún Pleanála

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Change History of Report

Date	New Revision	Author	Summary of Change

Executive Summary

This Planning and Environmental Report (PER) has been prepared by ESB Engineering and Major Projects (EMP) to accompany a planning application being made by the Electricity Supply Board (ESB) to An Coimisiún Pleanála (ACP) for a 110kV/38MV Distribution Substation, at Belmayne, Clonshagh, Dublin 17. For the purposes of the planning application ESB is acting in its capacity as licensed owner of the distribution system (see further Section 2.1 below).

The project for which planning consent has been sought is called the "Belmayne 110kV/38MW Distribution Substation" (hereafter referred to as the "Proposed Development"). The objective of this project is to add capacity and improve distribution security of supply for the North Dublin area. This will be achieved by taking power from the existing Belcamp 220 kV substation, located approximately 1 km northwest of the proposed development and transforming the voltage down to 38 kV for connection to the distribution network. This will relieve existing transformer capacity at the Grange 38 kV substation, located to the North of Dublin City.

This non-statutory PER has been prepared to ensure that appropriate planning requirements and potential environmental impacts of the proposed development on receiving environment are considered.

This PER and associated assessments have concluded the following:

- The development is necessary to ensure the secure and effective supply of electricity to the North Dublin area. National policy outlines the need to invest in the distribution grid to support growing populations. The electrification of new sectors will also drive the increased demand for electricity.
- The characteristics of the proposed development are compatible with the stated objectives and policies of the Dublin City Development Plan 2022-2028 and present no conflicts in terms of the land use zoning, which is Z14 Strategic Development Regeneration Area 1 Clongriffin/Belmayne and Environs.
- The development is considered to be compatible with all relevant policies and objectives including EU policy, national sectoral policy, national planning policy, regional planning policy and local planning policy.
- While EIA is not required, the likely significant impacts arising from the construction and operation of the proposed development were assessed against relevant environmental and planning criteria. Where necessary, mitigation measures have been recommended which will be fully implemented. These are detailed in this PER and set out in a standalone outline Construction and Environmental Management Plan (oCEMP) under separate cover.
- An Appropriate Assessment (AA) Screening has been prepared for the proposed development and is provided under separate cover. The AA Screening has established that the proposed development has no potential for likely significant effects on any European site, with particular regard to their conservation objectives, either alone or in combination with other projects or plans. Therefore, it is the professional opinion that (Stage 2) Appropriate Assessment is not required for the proposed development.

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Appendix E – Cultural Heritage Assessment Report

Appendix F – Landscape & Visual Impact Assessment

Appendix G – LVIA Photomontages

Appendix H – Landscape and Ecological Mitigation Plan

1 Introduction

This non-statutory Planning and Environmental Report (PER) has been prepared by ESB Engineering and Major Projects (EMP) to accompany a planning application being made by ESB to An Coimisiún Pleanála (ACP) for a 110kV/38MV Distribution Substation, at Belmayne, Clonshagh, Dublin 17. For the purposes of the planning application ESB is acting in its capacity as licensed owner of the distribution system (see further Section 2.1 below).

The project for which planning consent has been sought is called the "Belmayne 110kV/38MW Distribution Substation" (hereafter referred to as the "Proposed Development"). The objective of this project is to add capacity and improve distribution security of supply for the North Dublin area. This will be achieved by taking power from the existing Belcamp 220 kV substation, located approximately 1 km northwest of the proposed development and transforming the voltage down to 38 kV for connection to the distribution network. This will relieve existing transformer capacity at the Grange 38 kV substation, located to the North of Dublin City.

The Grange 38 kV/MV substation is overloaded. There is currently no available capacity to accommodate additional demand arising from new housing developments or associated commercial and retail projects in the area that will require connection over the next few years.

This PER and accompanying documentation have been prepared in support of this planning application to ensure that appropriate planning requirements and environmental effects are fully considered.

This report is structured as follows:

- Section 1 - Introduction
- Section 2 - The Planning Application
- Section 3 - The Proposed Development
- Section 4 - Environmental Assessment
- Section 5 - Planning Policy Context
- Section 6 - Planning Assessment
- Section 7 - Planning and Environmental Conclusions

An Appropriate Assessment Screening, a Biodiversity Enhancement & Management Plan and an Outline Construction Environmental Management Plan (oCEMP) have also been prepared in support of this planning application and are provided under separate covers.

2 The Planning Application

2.1 The Applicant

Permission is being sought by the Electricity Supply Board (ESB). The registered address of the applicant is ESB Head Office, 27 Fitzwilliam Street Lower, Dublin 2, D02KT92, Ireland.

ESB was established in 1927 as a statutory corporation in the Republic of Ireland under the Electricity (Supply) Act 1927. With a holding of 97.7%, ESB is majority owned by the Irish Government. The remaining 2.3% is held by the trustees of an Employee Share Ownership Plan.

ESB operates across the electricity market: from generation, through transmission and distribution to supply of costumers. ESB is the licensed owner of the transmission and distribution systems in Ireland and ESB's subsidiary, ESB Networks DAC is the licensed distribution system operator ("**DSO**"). Pursuant to the licences granted by the Commission for the Regulation of Utilities ("**CRU**"), and arrangements approved by CRU, these licensed network functions are carried out on a ring-fenced basis by staff in the 'ESB Networks' business unit of ESB, managed by ESB Networks DAC.

For the purposes of the planning application, ESB is acting (through the ESB Networks business unit), in its capacity as holder of the distribution system owner licence (also known as the distribution asset owner or 'DAO' licence) issued by the Commission for the Regulation of Utilities ("**CRU**"), pursuant to Section 14(1)(k) of the Electricity Regulation Act 1999 as amended ("**1999 Act**").

ESB, acting through the ESB Networks business unit, has appointed the ESB Engineering and Major Projects ("**EMP**") business unit to prepare this Planning and Environmental Report on its behalf for the purposes of the planning application.

ESB is committed to empowering the sustainable energy transition, by undertaking transformational changes across its business to achieve net zero emissions by 2040: developing and connecting renewables, building resilient infrastructure, and enabling and supporting customers to live more sustainably using clean electricity.

2.2 Site Location

The proposed development is located in Belmayne, Clonshagh, Dublin 17, within the townland of Belcamp in North Dublin, Co. Dublin (Figure 2-1). The southern boundary of the site is adjacent to the R139, with direct access from this road to the site. To the east lies the Northern Cross Business Park, with the closest premises being the Bewley's production facility. The northern boundary is adjacent to the Mayne River, with a buffer zone between the proposed site boundary and the river. To the west, the adjoining lands consist of grassland with a paved private roadway.

The site is currently surrounded by open lands, but this area is undergoing development, with residential developments located to the northeast and future development of residential and industrial/infrastructure to the north and west planned.

The proposed site is located c. 1 km southeast of the Belcamp 220 kV substation and it is intended to loop the proposed development into this substation.

The planning application boundary (Figure 2-2) encompasses c. 2.27 ha. The site is bounded by hedgerows and trees along its northern, southern and eastern boundaries and an internal access track to the west. The trees that bound to the north of the site are not located within the site boundary. The land is highly modified and disturbed, located in a predominantly built-up area with residential housing estates and commercial units. Existing habitats within the site include soil and bare ground, recolonising bare ground and dry meadows and grassy verges. The site is relatively flat with a gentle slope towards the stream from south to the north.

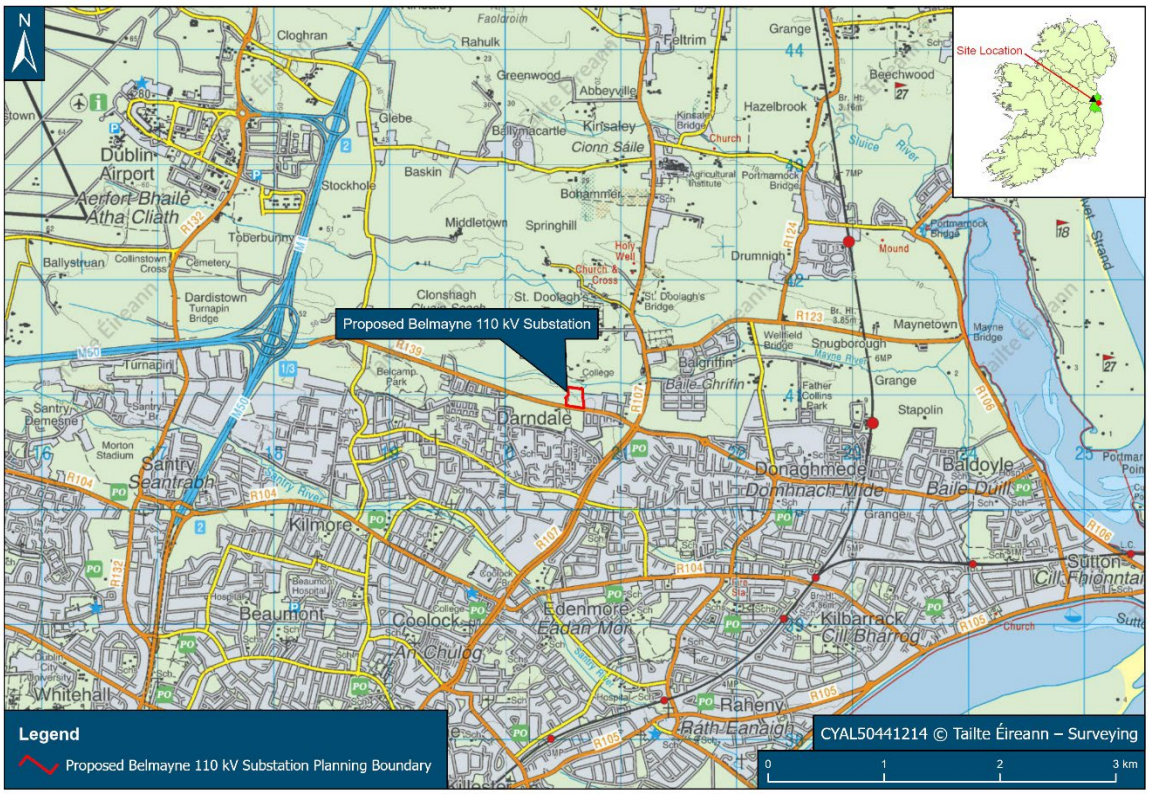

Figure 2-1: Site Location Map

Figure 2-2: Planning Application Boundary

2.3 Substation Development as Described in Public Notices

In accordance with Section 182A of the Planning and Development Act 2000, as amended, the Electricity Supply Board (ESB) gives notice of its intention to make an application for approval to An Coimisiún Pleanála in relation to the proposed development of a c. 2.27 ha site on the R139, Belmayne, Clonshagh, Dublin 17, described below.

The proposed development will consist of the construction of a 110 kV / 38 MV electrical substation and will include the following elements:

1. Construction of 1 no. substation compound (c. 5,650 sqm) securely enclosed with 2.6 m high palisade fencing and gates, containing:
    i. 1 no. 110 kV Gas Insulated Switchgear (GIS) building (c. 707 sqm; c. 12 m in height).
    ii. 1 no. 38 kV Gas Insulated Switchgear (GIS) building (c. 232 sqm; c. 7 m in height).
    iii. 2 no. Bunded 110 kV/38 kV Transformers (c. 5 m in height) with associated electrical equipment.
    iv. 2 no. Bunded 38 kV/MV Transformers (c. 5 m in height) with associated electrical equipment.
    v. 2 no. fire walls (c. 5.5 m in height by c. 5 m length) separating the 110 kV/38 kV Transformers and 38 kV/MV Transformers.
    vi. 3 no. bunded Arc Suppression Coils (c. 4 m in height) with associated electrical equipment.
    vii. 2 no. Neutral Earth Resistor (c. 2 m in height) and Neutral Earth Switch (c. 3.9 m in height).
    viii. Perimeter RC wall with Stone Facing on West, North and South Elevations (2.6 m high).
2. Removal and reinstatement of 2 No. Gate Piers at existing entrance and provision of vehicular gate (c. 5 m wide x c. 2.6 m in height) and all associated works at the existing entrance on the R139.
3. All associated site development works including internal access roads, lighting poles (c. 5.75 m in height), 3 no. lightning monopoles (c. 15 m in height), 1 no. emergency stand-by diesel generator, telecommunications, landscaping, site services including drainage, trenching and ducting and all other ancillary works.

The proposed substation will form part of the ESB 110 kV Distribution System and will be operated by ESB Networks DAC in its capacity as the Distribution System Operator (DSO).

2.4 Planning History

A search of the Dublin City Council planning website and the An Coimisiún Pleanála website was conducted to establish the planning history of the subject site. Table 2-1 outlines the planning applications that have been made for the proposed development lands.

Table 2-1: Summary of Planning History on site

Planning Ref. No. Date	Description of Development	Notes
3162/04	Permission for an illuminated advertising sign 7m high	Permission Granted
ABP TA06F.313494	10-year permission for the construction of 2,527 no. residential units (473 no. houses, 2054 no. apartments), creche and associated site works	Application withdrawn in Dec 2024

While there are no relevant planning permissions on the subject site, several planning applications have been made in recent years in the surrounding lands. There is currently a live planning application for 1,350 residential units (LRD0068/S3E) in Fingal County Council Lands just north of the proposed development. No conflict with existing land uses is foreseen.

The ongoing and planned development in the North Fringe Area reflects the investment in housing, infrastructure and industry which is taking place currently and will continue into the future according to the Dublin City Development Plan (DCDP). The planning history within the surrounding area highlights the requirement for upgraded electricity infrastructure to accommodate the substantial development envisaged, including over 7,000 residential units proposed under the DCDP.

2.5 The Planning Application Process

2.5.1 Dublin City Council (DCC) Pre-Planning Consultation

An online pre-planning consultation meeting with DCC was held on 15th January 2026 in accordance with Section 247 of the Planning and Development Act 2000, (as amended) [hereafter referred to as the 'PDA 2000']. The purpose of this consultation was to allow the planning authority to consider the proposed development in principle and to provide ESB with guidance on relevant policies and objectives to be considered in the design of the project.

2.5.2 An Coimisiún Pleanála (ACP) Pre-Planning Consultation

ESB submitted a pre-planning consultation request to ACP on 2nd October 2025 seeking confirmation whether the proposed development constitutes Strategic Infrastructure Development (SID) in accordance with Section 182A of the PDA 2000. On 28th January 2026 (Case No. 323789-25), ACP decided that the proposed development falls within the scope of Section 182A of the PDA 2000, and that a planning application should be made directly to the Commission (Appendix A).

2.5.3 Statutory Consultation and Public Notices

In accordance with the requirements for public notices set out under the PDA 2000, ESB has notified the public of this application by means of the following:

- Site notice – 1 no. site notice has been erected on the relevant land. The location of the notice is shown on the submitted planning application drawings. A copy of the notice is included in the application pack.
- Newspaper notice – Notices have been published in The Irish Examiner and The Star. Copies of both newspaper notices have been included in the application pack.
- A copy of this application has been circulated to the prescribed bodies, as advised by ACP during the pre-planning consultations.
- A stand-alone website has been established (www.belmayne110kvsubstation.ie). All planning application documentation can be viewed on this website.

2.5.4 Drawing Scales

This application has been prepared in accordance with the requirements set out under the PDA 2000 and its associated regulations, as amended. The list of drawings prepared in support of this planning application is tabulated in Table 2-2.

Table 2-2: Drawings Submitted in Support of Planning Application

Drawing Title	Drawing Number	Size	Scale
Site Location Map	PE492-D327-006-001	A1	1:2500
Existing Site Layout	PE492-D327-006-002	A1	1:500
Road Entrance and Sightlines	PE492-D327-006-003	A1	1:100
Proposed Site Layout	PE492-D327-006-004	A1	1:500
Proposed Site Sections	PE492-D327-006-005	A1	1:200
Proposed Site Elevations	PE492-D327-006-006	A1	1:200
Proposed Drainage Layout	PE492-D327-006-007	A0	1:250
Proposed Watermain Layout	PE492-D327-006-008	A0	1:250
Elevations Along Boundary Wall	PE492-D327-006-010	A1	1:200
38 kV GIS Building Plans and Sections	PG406-D100-087-003	A0	1:50
38 kV GIS Building Elevations	PG406-D100-087-004	A1	1:100
110 kV GIS Building Plans and Sections	PG406-D100-087-005	A0	1:100
110 kV GIS Building Elevations	PG406-D100-087-006	A1	1:100
110 kV Transformer Bund Details	PG406-D100-088-001	A1	1:50
38 kV Transformer Bund Details	PG406-D100-088-002	A3	1:50
Arc Suppression Coil Bund Details	PG406-D100-088-003	A3	1:50
Typical House Transformer Details	PG406-D100-088-005	A3	1:25
Typical NES Details	PG406-D100-088-006	A3	1:25
Typical NER Details	PG406-D100-088-007	A3	1:25
Lightning Monopole Details	PG406-D100-088-008	A3	1:25
Road and Compound Details	PG406-D100-088-010	A3	1:10 / 1:25

Drawing Title	Drawing Number	Size	Scale
Typical Drainage Details	PG406-D100-088-011	A1	1:25
Lighting Details	PG406-D100-088-012	A3	1:25 / 1:50
Details of Stone Wall	PG406-D100-088-017	A3	1:25
Details of Timber Gates	PG406-D100-088-018	A1	1:10 / 1:25
Typical Attenuation Tank	PG406-D100-088-019	A1	1:50
Palisade Fence and Gate Details	PG406-D100-088-021	A1	1:20
Concrete Post and Rail Fence and Tubular Steel Gate Details	PG406-D100-088-022	A3	1:25

2.5.5 Statement of Legal Interest in the Lands

ESB is the legal owner of the majority of the proposed development site. The proposed access road and the area to the north of the site in the vicinity of the Uisce Éireann foul sewer connection remains in the ownership of a 3rd party. The relevant landowner has provided a letter of consent authorising the submission of this application.

3 The Proposed Development

3.1 Description of the Proposed Development

The brief description of the proposed development is included in Section 2.3. The existing and proposed site layouts are illustrated on drawings PE492-D327-006-002 and PE492-D327-006-004, respectively.

3.2 Project Rationale

Under its Networks for Net Zero strategy, ESB Networks DAC, in its capacity as DSO, has committed to delivering a net zero ready electricity distribution network by 2040 to enable Ireland to achieve its legally binding net zero target by 2050. ESB Networks DAC has published its Distribution Network Development Plan (DNDP) to provide information on the existing distribution network capacity, assess future capacity to accommodate customer needs and identify areas of the distribution network that requires investment to provide the necessary capacity and security supply across the distribution grid.

As outlined in the DNDP, significant investment is required over the next decade to build the distribution capacity to enable:

- Connection of the renewable generation to our network that will generate the clean electricity; and
- Increase in demand associated with significant population growth, new housing developments, economic growth, as well as a significant increase in demand due to electrification of heat, transport and industry.

Forecasted peak demand on the distribution network for the North Dublin area, where the proposed development is located, is estimated to increase by between 3.8 and 5.7 % during the period 2025-2030.

Following a network assessment and investment appraisal, ESB Networks DAC has determined that a new 110/38 kV/MV distribution substation is required in the North Dublin area to provide network reinforcement and increased capacity.

The existing Grange 38 kV/MV substation located to the north of Dublin City is overloaded. There is currently no available capacity to accommodate additional demand arising from new housing developments or associated commercial and retail projects in the area that will require connection over the next few years.

The objective of this project is to add capacity and improve distribution security of supply for the North Dublin area. This will be achieved by taking power from the existing Belcamp 220 kV substation, located approximately 1 km northwest of the proposed development and transforming the voltage down to 38 kV for connection to the distribution network. This will relieve existing transformer capacity at the Grange 38kV substation, located to the North of Dublin City.

The proposed development is driven by several key factors that will deliver additional capacity and enhance security of supply for the North Dublin area, including:

- The load on Grange 38 kV/MV station is 17.54 MVA, the winter firm capacity for this station is 15 MVA with a short time load limit of 18 MVA.
- Dart applications requests for MIC increases for North Coastal in Malahide, Portmarnock, Bayside, Raheny and Fairview.
- Dublin City Council (DCC) have identified that the North Fringe area will ultimately provide for approximately 7,000 new housing units as well as associated retail, commercial and hotel facilities. These will be developed over a 5-10yr period approximately. The new housing also requires the development of a water treatment plant, previous applications indicated this could be 4-5 MVA.

Fingal County Council in Local Area Plans have identified the neighbouring Stapolin (1,500-2,000 units) and Portmarnock (1,200 units) areas as having the potential to provide significant additional housing units.

- The Finglas Rural 110 kV Network is currently out of N-1-1 planning standard. This means it will remain difficult to transfer load to Kilmore from Grange once Newbury has been moved to Belcamp.
- There have been significant new demand applications in the Kilmore vicinity (18 MVA).

3.3 Construction Works

The commencement date for construction is subject to the date of grant of planning permission, pre-commencement obligations, and progression of the design to construction stage. The key civil works and construction activities are detailed in Section 3.3 herein. Further detail is provided in the oCEMP, submitted under separate cover in support of this planning application. Final construction details will be outlined and agreed ultimately in the CEMP, to be prepared by the appointed Contractor, as part of compliance.

The construction works will take place in three broad phases, details of each phase are outlined below.

3.3.1 Enabling Works

The exact programme of works will be proposed by the Contractor prior to mobilisation to site. The following is a non-exhaustive list of the works to be carried out:

- Site demarcation and establishment of temporary construction compound including welfare facilities, site office etc.
- Demarcation of clearances required by Uisce Éireann to Foul Line to the North of the Site and Watermain to the South of the site.
- Site entrance modifications and creation of access road.
- Earthworks including site levelling and cut/fill works.

3.3.1.1 Construction Plant and Machinery

The following is a list of plant that will be utilised at the site during construction:

- Tracked Excavators
- Dumper
- Ride on Roller
- Concrete Pump
- Drills, Saws and other Power Tools
- Water Pump
- Generators
- Mobile Cranes

3.3.1.2 Temporary Construction Facilities

Site Access and Signage

The site is located immediately to the west of Bewley's production facility with an access directly from the R139. It is surrounded by open lands, but this area is undergoing development with residential development located to the north-east and future development of residential and industrial/infrastructure to the north and west.

Site access and construction traffic signage will be established by the Construction Contractor. Advance warning/hazard signage shall be erected in both directions leading to the substation in accordance with health and safety legislation and in accordance with Chapter 8 of the Traffic Signs Manual.

Laydown Areas

Dedicated temporary laydown and storage areas will be identified for construction plant and equipment by the Contractor. This area will be available for any fabrication that may be necessary.

Contractors Site Compound and Services

A temporary construction compound will be set up upon commencement of the construction phase. The compound will be located within the greenfield site of the proposed substation and a temporary surface comprising granular stone material will be constructed for the compound. There is sufficient space to the north and south of the proposed substation to accommodate a temporary construction compound.

The compound will be constructed early in the project in order to provide site offices and accommodation for staff and for the delivery of materials. Facilities will include office space, meeting rooms, canteen area, a drying room and sanitary provisions. This will be maintained by the Contractor on a regular basis and will be removed from the site on completion of the construction phase.

Any surface water management, bunding and waste management measures will also be put in place at the outset. A bunded containment area will be provided within the compound for the storage of lubricants, oils and site generators etc.

The compound will be in place for the duration of the construction phase and will be removed once works are complete.

3.3.2 Civil Construction

The exact programme of works will be proposed by the Contractor prior to mobilisation to site. The following is a non-exhaustive list of the works to be carried out:

- Construction of 110 kV GIS Building and 38 kV GIS Building.
- Construction of electrical equipment foundations.
- Construction of site drainage works.
- Trenching and ducting works for underground 38 kV and MV cables.
- Trenching and ducting works for underground LV and control & protection cables.
- Installation of substation earth-grid.
- Permanent surface water drainage works.
- Construction of new palisade fence to compound boundary.
- Construction of concrete post and rail fence outside new palisade fence to outer boundary/ legal line.
- Compound stoning and paving.
- Finishing and Completion works.

All works will be carried out in accordance with the building regulations and up-to-date design codes at the time of mobilisation.

3.3.2.1 Cut and Fill

In the Table 3-1 shows a preliminary estimate of the quantities of primary earthworks materials.

Table 3-1: Summary of Total Material Volume for the Proposed Development

Item	Total (m^3)
Estimated Total Material to be Excavated	2,250
Estimated Total Stone Import	5,800

Refer to Section 4.2.7 for detail on waste and resource management.

3.3.3 Electrical Installation

Electrical installation includes the following:

- Delivery and installation of 2 No. 110 kV/38 kV Transformers.

- Delivery and installation of 2 No. 38 kV /MV Transformers.
- Delivery and installation of 3 no. Arc Suppression Coils.
- Delivery and installation of all other outdoor HV equipment.
- Pulling and termination of 38 kV & MV cables.
- LV cabling and wiring of 38 kV equipment and protection and control equipment.
- Installation of compound lighting and security systems.
- Commissioning of electrical substation.

3.4 Construction Programme

The commencement date for the development is subject to the date of grant of planning permission, pre-commencement obligations, and completion of the tender process for the selection of the contractor.

The construction programme (Table 3-2) may vary depending on availability of required outages at Belcamp 220 kV Substation from the electrical transmission system operator, and the time of year, weather conditions and the availability of specialised equipment.

The timing of stages and activities are approximate based on experience of similar projects, and this is meant as a guide, rather than a definitive programme of events.

Table 3-2: Outline Construction Schedule

Phase	Activity	Approximate Timeline	Total
Civil Construction	Site Preparation & Enabling Works	8 Weeks	52 Weeks
	Civil Construction	44 Weeks	
	Ancillary Civil Works	24 Weeks	
Electrical Installation	Electrical Installation	52 Weeks	78 Weeks
	Electrical Commissioning	26 Weeks	

The total construction duration for the project is estimated as 130 weeks from commencement.

The main construction works will comprise the construction of the substation compound and all electrical equipment foundations. The ancillary civil works will comprise of site works including installation of cable ducting, drainage, site boundary treatments, surfacing works etc.

Electrical installation works will commence following completion of the main civil construction works and will consist of the installation of the primary electrical equipment.

Some items of the ancillary civil works, the electrical installation and commissioning works will overlap.

3.4.1 Working Hours

The proposed working hours for the construction phase of the project are tabulated below (Table 3-3). No construction works will take place outside these hours, unless such work:

- Is required under exceptional circumstances; or

- Is carried out with the prior written approval of the local authority (e.g. abnormal load permit).

Table 3-3: Normal Construction Working Hours

Day	Working Hours
Monday to Friday	07:00 – 19:00
Saturday	08:00 – 16:00
Sunday or Bank Holiday	N/A

3.4.2 Construction Personnel

A maximum daily workforce of approximately 45 personnel is expected during the peak period for construction works on site. However, typical daily workforce requirements will be less than this, approximately 30 personnel. Car parking for workers and visitors will generally be provided in the Contractor's compound.

3.4.3 Construction Traffic Movement

The existing entrance off the R139 is proposed to be used for the duration of the construction phase.

There will be an expected daily peak of c.60 HGV movements during the site preparation stage. Most of the deliveries will be during the construction of the groundworks and the foundations for the substation. A maximum daily workforce of approximately 45 personnel is anticipated during the peak construction period, while the average daily workforce is expected to be around 30.

Refer to Section 4.2.4 for further information regarding construction traffic.

3.5 Operation Phase Activities

Once commissioned, the substation will be operating 24-hours per day, seven days per week. The plant will not have permanent staff but there will be periodic engineering checks and maintenance visits. Lighting of the compound area will only occur during these periods.

During this lifespan there will be on-going routine maintenance on the different primary plant units. The routine maintenance will be carried out within the substation compound and no environmental impacts are envisaged.

3.5.1 Operation Traffic Movement

The facility will typically be unmanned. Traffic levels during the operational stage will relate to occasional maintenance vehicles travelling to the substation. This is expected to be on average two to four vehicles arriving on site per month. A two-person crew visiting site for three days a week would be the most that would be expected on the site. In such circumstances the operatives could be expected to use each of the facilities four times a day.

All such trips will be by a light van or at most a tractor/trailer type vehicle. Given the low levels of traffic generated by operational traffic and the available capacity at the local road network potential impact is considered negligible.

3.5.2 Engineering Services

An Engineering Services Report (ESR) has been prepared by ESB Engineering and Major Projects for the proposed development (Appendix B). A summary of the existing and proposed surface water, foul and water supply is provided below.

3.5.2.1 Surface Water

Existing Surface Water Drainage

The site is currently greenfield with no built surface water drainage infrastructure.

The Clonshagh Stream, located along the northern boundary of the site, is the closest watercourse to the proposed development. This stream forms part of the hydrological network that connects to the Mayne River (WFD Mayne_010). The site slopes from south to north, resulting in all surface water on site flowing naturally toward the Clonshagh Stream.

Proposed Surface Water Drainage

The surface water drainage proposals for the proposed electrical substation have been developed to mimic the natural drainage patterns of the site and to be in accordance with Sustainable Drainage Systems (SuDS). The surface water proposals replicate greenfield drainage conditions where possible.

A new surface water network is proposed to collect run-off from all hardstanding areas and discharge it to the existing public surface water sewer, south of the site.

The internal roads will be macadam with gullies to collect run-off. Gullies will discharge the collected surface water to underground pipes, which will convey the collected water to tree pits and an underground attenuation before discharging. Non-trafficked areas will be compound stone, allowing a portion of rainfall to infiltrate into the ground, mimicking the undeveloped sites natural water cycle.

Run-off will be treated to remove sediments and pollutants prior to discharge from site.

The surface water drainage proposals are illustrated on drawing No. PE492-D327-006-007.

3.5.2.2 Foul Water

Existing Foul Water Drainage

The existing site is currently greenfield with no wastewater connection/discharge to the local wastewater infrastructure.

Uisce Éireann records indicate that there is a 1050 mm concrete sewer running west-east adjacent to the Mayne River, to the north of the proposed development.

Proposed Foul Water Drainage

It is proposed to separate the wastewater and surface water drainage networks, which will serve the proposed development, and provide independent connections to the local public foul and surface water sewers respectively. Wastewater generated on site will be discharged to the existing wastewater manhole to the north.

The foul water drainage proposals must cater for the wastewater generated in the welfare facilities of the proposed development.

The proposed development will generate small quantities of foul waste as the facility will typically be unmanned. As such, the quantities of foul waste generated will therefore be low.

3.5.2.3 Water Supply

Existing Water Supply

There is currently no water supply within the site of the proposed development.

Proposed Water Supply Proposals

A 25 mm HDPE watermain is proposed to connect to the 600 mm existing watermain in the R139 which will provide the water supply for the new toilet and Wash Hand Basins (WHBs) associated with the development.

The water supply proposals are illustrated on drawing PE492-D327-006-008.

3.6 Associated Grid Connection

The indicative underground cable grid connection for the proposed substation does not form part of the planning application as detailed further below.

The proposed substation will be connected to the existing Belcamp 220 kV substation located c. 1 km to the northwest via an underground double-circuit 110 kV cable, which will be routed likely within the existing road network or through the adjacent fields. The proposed cable route is at a preliminary design stage, will be subject to agreement with EirGrid and detailed design following receipt of planning consent, but the general technical requirements for the project will remain unchanged. The grid connection will be delivered under the provisions of Class 26 in Part 1, Schedule 2 of the Planning and Development Regulations 2001 (as amended).

Class 26 *The carrying out by any undertaker authorised to provide an electricity service of development consisting of the laying underground of mains, pipes, cables or other apparatus for the purposes of the undertaking.*

4 Environmental Assessment

This chapter provides details of the scope and approach to the environmental assessment, a summary of the assessment findings relative to each environmental topic considered and summary of mitigation and management measures identified during the assessment process.

4.1 Scope and Approach

4.1.1 Environmental Impact Assessment (EIA) Screening

The applicant has considered the provisions of Schedule 5 of the Planning and Development Regulations 2001 (as amended) and the governing European Directives.

The proposed development does not fall within any of the classes of development under Part 1 or Part 2 of Schedule 5 of the Planning and Development Regulations 2001 (as amended).

The proposed development is not a type of development to which Schedule 5 applies and therefore the requirement for sub-threshold development does not apply (as that can only

apply to a Schedule 5 development). As such it is considered that an EIA is not required for the proposed development.

This planning application is supported by this non-statutory PER to ensure that appropriate planning requirements and any potential environmental impacts to the receiving environment are considered.

4.1.2 Environmental Scoping

A preliminary environmental scoping exercise has been carried out by ESB to identify the environmental aspects relevant to this PER, with particular attention to sensitive areas requiring detailed analysis. The scoping exercise has guided an iterative design process, resulting in modifications of the proposal to address key environmental considerations such as Flood Risk, Drainage Design and Landscaping. Previous experience with similar developments provided additional insight during this process.

Following the preliminary scoping exercise, the PER and supporting appendices have comprehensively addressed the following environmental topics:

- Biodiversity (Section 4.2.1)
- Water (Section 4.2.2)
- Noise Impact Assessment (Section 4.2.3)
- Traffic and Transport (Section 4.2.4)
- Cultural Heritage Assessment (Section 4.2.5)
- Landscape and Visual Impact Assessment (Section 4.2.6)
- Waste and Resource Management (Section 4.2.7)

An Appropriate Assessment Screening, a Biodiversity Enhancement & Management Plan and an oCEMP have also been prepared in support of this planning application and are provided under separate covers.

4.2 Environmental Assessment

4.2.1 Biodiversity

4.2.1.1 Introduction

This Ecological Impact Assessment (EcIA) for the proposed development (as described in Section 2.3) has been carried out by Shay Gurn (B.Sc., Graduate Ecologist at ESB Engineering and Major Projects) under the guidance of as well as reviewed by Ria Aherne (B.Sc., Senior Ecologist at ESB Engineering and Major Projects). The purpose of this assessment is to identify, describe and assess the likely significant effects of the proposed development on the existing ecological environment and where relevant provide mitigation measures to avoid significant residual effects.

A standalone Appropriate Assessment Screening has been produced, in accordance with the requirements of the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (hereafter referred to as the 'Habitats Directive') and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), which considers the potential impacts of the proposed development on European sites (sites designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs))

within the Zone of Influence of the proposed development and should be read in conjunction with this report.

A Biodiversity Enhancement & Management Plan has been produced and will accompany a planning application being made by ESB to ACP. The purpose of this plan is to secure, sustain and enhance the biodiversity value of the proposed Belmayne substation site in the future.

4.2.1.2 Approach and Methodology

Assessment Criteria

This EcIA has been prepared in line with the following established best practice guidance:

- Chartered Institute of Ecology and Environmental Management (2018 (Version 1.2, April 2022)) Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater, Coastal and Marine
- EPA (2022) Guidelines on the information to be contained in Environmental Impact Assessment Reports
- NRA (2009) Guidelines for Assessment of Ecological Impacts of National Road Schemes (formerly National Roads Authority (NRA), now Transport Infrastructure Ireland (TII))
- DHPLG (2018) Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment

The following legislation and policy documents have also been considered as part of this EcIA:

- European Communities (Birds and Natural Habitats) Regulations 2011 S.I. 477 of 2011 (as amended)
- The Habitats Directive (92/43/EEC) (as amended)
- The Birds Directive (2009/147/EC) (as amended)
- The Wildlife Act, 1976 (as amended)
- The Flora (Protection) Order 2022 [S.I. 235/2022]
- Dublin City Council Development Plan 2022-2028 Vol 1 (DCC, 2022)
- Fingal County Council Development Plan 2023-2029 Stage 2 (FCC, 2022)
- Ireland's 4th National Biodiversity Action Plan 2023-2030 (National Parks & Wildlife Service, 2023)

In accordance with the NRA/TII and CIEEM methodological guidance (outlined above), an evaluation of the value of ecological receptors at the proposed development site was carried out in order to characterise effects, to assess the significance of effects and establish the scale of any residual effects. Potential impacts to Key Ecological Receptors form a core aspect of this assessment; these are defined as features of sufficient value as to be material in the decision-making process for which potential impacts are likely.

Ecological receptors are valued as follows:

- International Importance
- National Importance
- County Importance
- Local Importance (Higher Value)

- Local Importance (Lower Value)

Features of Local importance (Lower Value) are not considered to be Key Ecological Receptors.

Desktop Study

A desktop study was undertaken to establish the existing ecological conditions of the proposed development site and its surrounding environs and to identify the Zone of Influence of the proposed development. The following information was consulted as part of this study:

- Information on international and national designated sites for nature conservation (SACs, SPAs, Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs)) and protected and rare species, held by National Parks and Wildlife Service (NPWS), viewed on the 8th January 2026 at https://www.npws.ie/
- Information on records of protected and rare species, held by the National Biodiversity Data Centre (NBDC), viewed on the 8th January 2026 at https://maps/biodiversity.ie/Map
- Information on surface, ground and coastal waterbodies, including the nomenclature of waterbodies and Water Framework Directive status, held by Environmental Protection Agency (EPA), viewed on the 8th January 2026 at https://gis.epa.ie/EPAMaps/
- Aerial photography of the proposed development site and the surrounding area as relevant to this assessment, held by Ordnance Survey Ireland, viewed on 8th January 2026 at https://geohive.ie/
- Information on planning applications within the environs of the proposed development site, viewed on the 8th January 2026, held by Dublin City Council at https://www.dublincity.ie/planning-and-land-use/find-planning-application/view-or-search-planning-applications
- Information on planning applications within the environs of the proposed development site, viewed on the 8th January 2026, held by Fingal Council at https://www.fingal.ie/view-or-search-planning-applications
- Information on the location and design of the proposed development provided by the design team.

Field Survey

The proposed development site was visited by ESB ecologists, on 29th April 2025. The purpose of this survey was to identify all habitats within the proposed development site boundary and to assess their potential to support protected and/or rare species. Additional ESB personnel attended site on 18th December 2025, and photos taken on the day were used to inform part of this assessment.

The approach to the field surveys is based on accepted standard practice and methods. Habitats within the study area were classified after 'A Guide to Habitats in Ireland' (Fossitt, 2000). The dominant plant species present in each habitat type were recorded during the field surveys and this is considered sufficient to allow accurate classification of the habitats present and assess their correspondence to habitats listed as Qualifying Interests, with reference to the Interpretation Manual of European Union Habitats (EC, 2013).

Limitations

The field survey was undertaken outside of the optimal season for flowering plants. However, this is not considered to be a significant limitation on the findings of this assessment given that the proposed development site is dominated by recolonising bare ground, and buildings and artificial surfaces which is low in species diversity. The ecology field survey was carried out prior to site acquisition, with subsequent pre site acquisition surveys noting that an area of scrub had been cleared and reclassified as recolonising bare ground. As the recent clearance significantly reduced the ecological value of the habitats, it was concluded that additional ecological surveys were unlikely to identify any new receptors.

4.2.1.3 Receiving Environment

The proposed development site is a greenfield site located northeast of Darndale Park and regional road (R139), west of Bewley's Tea and Coffee Head Office Golf Club, south of Washington Memorial Tower, and southeast of Belcamp 220 kV substation and Craobh Chiarans Pitch Clonshagh.

Designated Sites for Nature Conservation

The proposed development site is not located within or immediately adjacent to any European sites (Figure 4-1) or nationally designated site(s) (Figure 4-2). The nearest site is the Baldoyle Bay SAC (000199), which is located approximately 2.9 km northeast of the proposed development site. This is followed by the Baldoyle Bay SPA (004016), which is located 3.4 km northeast of the proposed development site. The nearest nationally designated site is Baldoyle pNHA (000199), which is approximately 2.9 km northeast of the proposed development site.

The only potential impact pathway that exists between the proposed development and designated sites is via a hydrological connection – i.e. instream distance of 110 m of the Clonshagh Stream, a further 2.9 km instream distance via the Mayne River, before reaching Baldoyle Bay SAC (and Baldoyle Bay pNHA) and a further 500 m of the Mayne River before reaching Baldoyle Bay SPA. The Clonshagh Stream is the nearest watercourse to the site and connects to the Mayne River. All other designated sites are considered to be beyond the ZoI of the proposed development. European sites are valued as being of international ecological importance, while pNHAs are valued as being of national ecological importance.

The assessment of potential impact on European sites arising from the proposed development is fully assessed and presented in the AA Screening report submitted as part of this planning application.

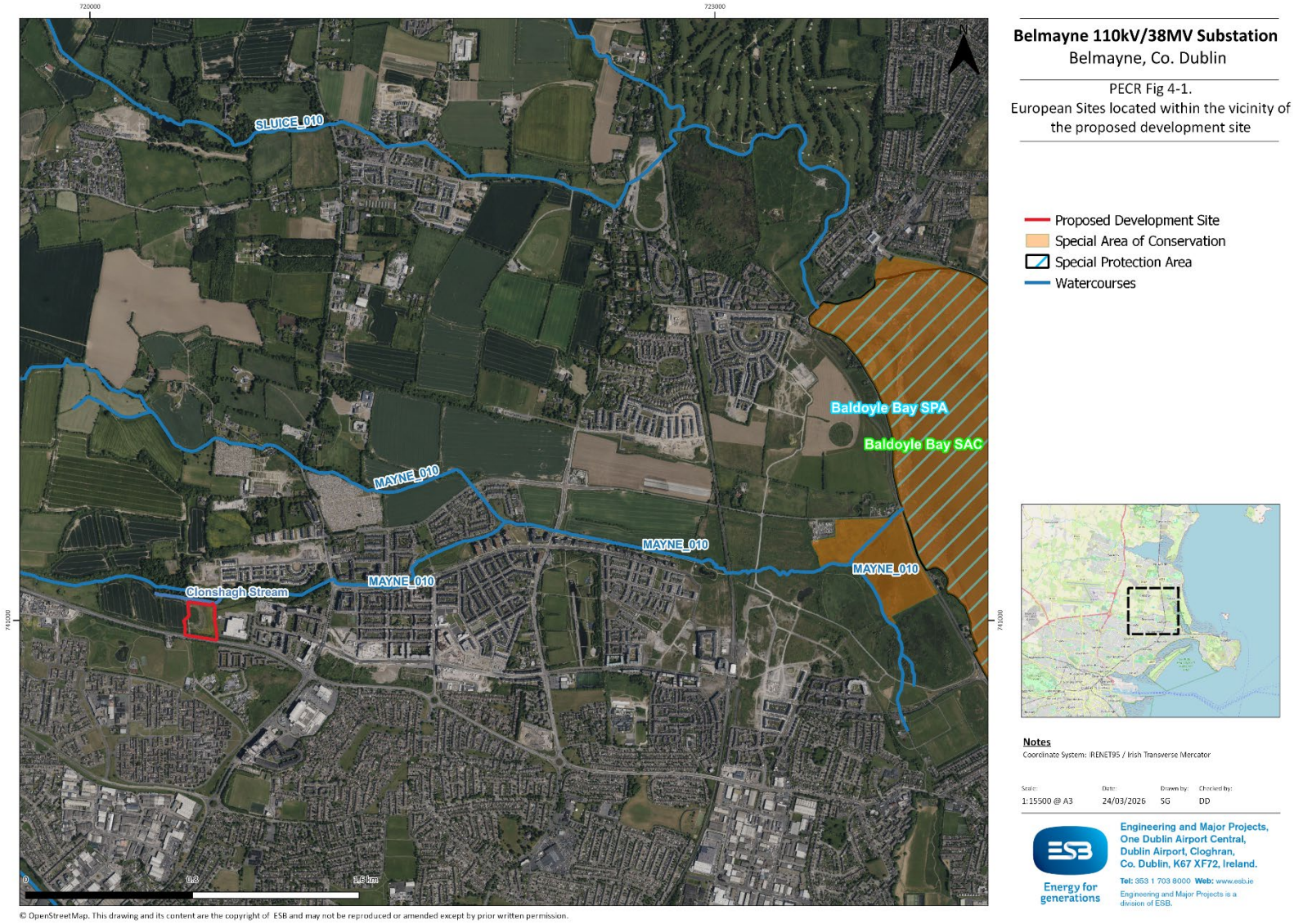

Figure 4-1: European sites located within the vicinity of the proposed development site

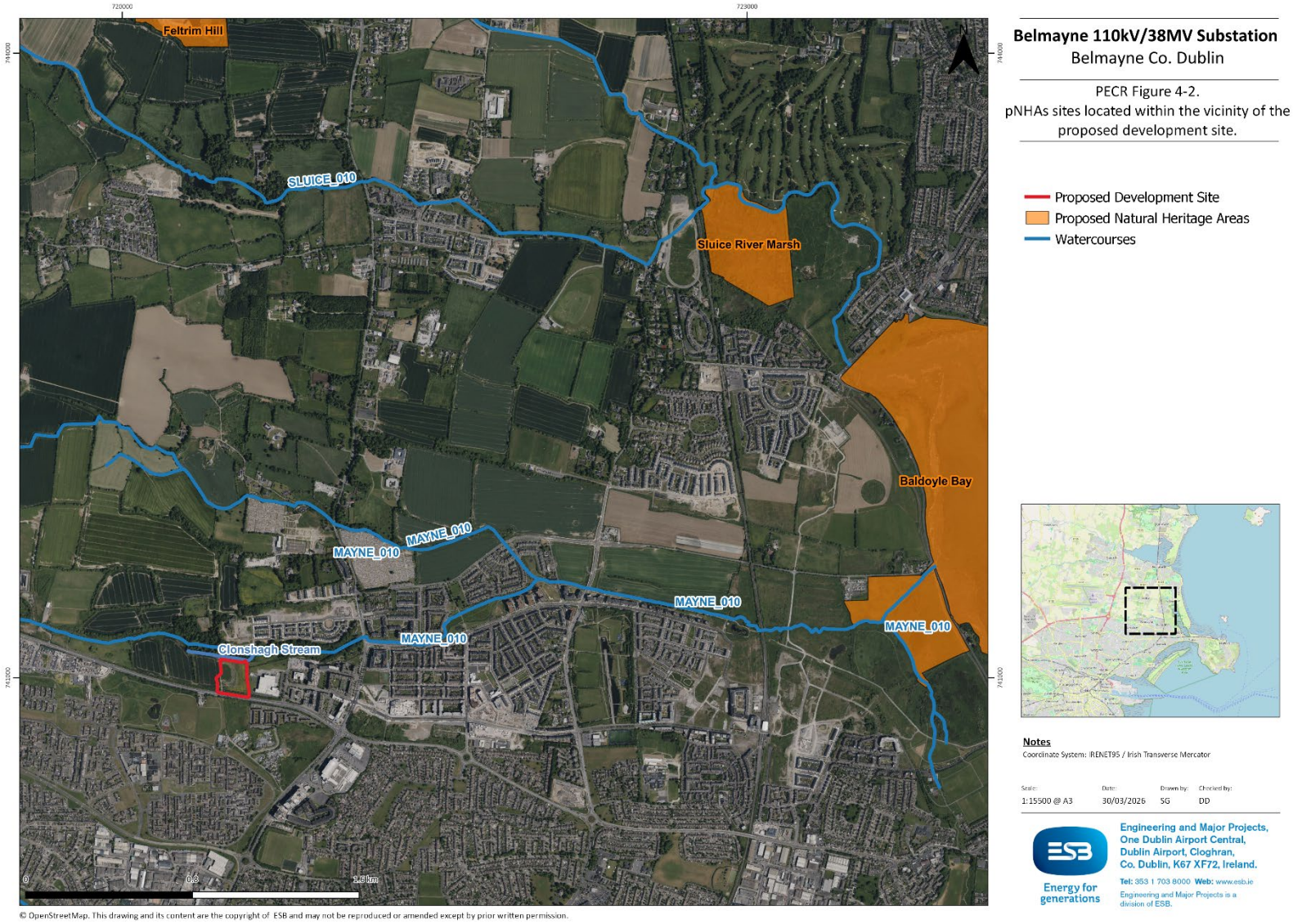

Figure 4-2: pNHA sites located within the vicinity of the proposed development site

Habitats and Protected/Rare Plant Species

No protected and/ or rare plant species were recorded during the field survey on 29th April 2025. According to NPWS Flora (Protection) Order 2022 map viewers opposite-leaved pondweed *(Groenlandia densa)* was recorded within 1km hectad O24 in 2017, which overlaps with the proposed development. There are no recent records (i.e. last 25 years) of protected and/ or rare plant species within the proposed development site according to NBDC map viewer 2km grid square O24A. No Third Schedule or high impact invasive species were recorded during the field survey on 29th April 2025. There are records of invasive plant species (giant hogweed *(Heracleum mantegazzianum)* and butterfly bush (*Buddleja davidii*)) according to NBDC map viewer 2 km grid square O24A, which overlaps with the proposed development. A subsequent site visit was completed on 18th December 2025, and it was evident that an area of scrub that was previously recorded during April 29th visit had been removed.

The site, at the time of survey, comprised the following habitat types (Figure 4-3):

- Recolonising bare ground (ED3) - recently disturbed consisting of common ruderal species i.e. dock (*Rumex obtusifolius*), broadleaf plantain (*Plantago major*), common nettle (*Urtica dioica*), scentless mayweed (*Tripleurospermum inodorum*), and dandelion (*Taraxacum sp.)* Bare ground cover is 30%, with this habitat considered to be of local importance (lower value).
- Buildings and artificial surfaces (BL3) - hardstanding area on entrance road on western side of the site considered to be of local importance (lower value).
- Treelines (WL2) – immature treeline consisting of willow (*Salix spp*), blackthorn (*Prunus spinosa*), and ash (*Fraxinus excelsior)* and english ivy (*Hedera helix*). There were pockets of the invasive butterfly bush (*Buddleja davidii*) throughout. This habitat is considered to be of local importance (higher value).
- Tilled Land (BC3) – This habitat was located on the western side of the access track, it appeared to be dominated by one species however it was recently cut therefore crop identification was not possible. This habitat is considered to be of local importance (lower value).
- Eroding upland rivers (FW1) – This habitat (Clonshagh Stream) was located on the northern side of the proposed development, approximately 10 m outside of the proposed development boundary. This stream forms part of the Mayne_010 water framework directive (WFD) river waterbody (waterbody code: IE_EA_09M030500) and was classed as having a “poor” water quality status during the WFD monitoring period of 2019-2024 and is considered “at risk”. This habitat is considered to be of local importance (higher value).

Photos of the habitats within the proposed development site are provided below (Plate 4-1 - Plate 4-3)

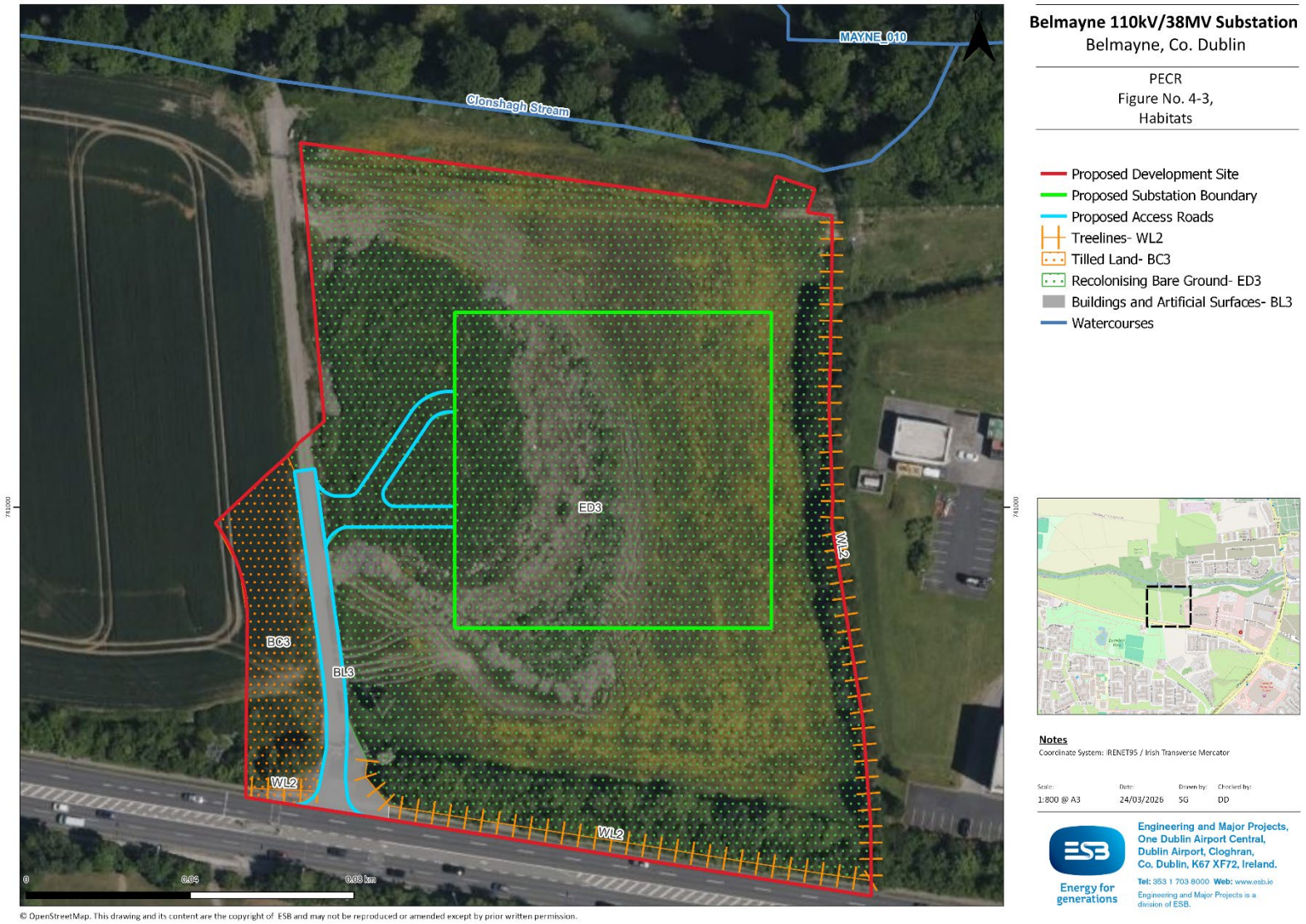

Figure 4-3: Habitats present within the proposed development site

Plate 4-1: Buildings and artificial surfaces (BL3). Access for proposed development. Photograph taken facing a southerly direction.

Plate 4-2: Recolonising bare ground (ED3). Proposed location for new substation. Photograph taken facing a westerly direction.

Plate 4-3: Treelines (WL2) along north-easterly boundary of the proposed development site. The treeline is to be retained. Photograph taken facing a southerly direction.

Species

Birds

During the field study, a buzzard *(Buteo buteo)* was recorded flying over the site.

According to NBDC map viewer (2 km grid square O24A), the following bird species were recorded within approximately 2 km of the proposed development site:

Twenty five Red-listed bird species (as per Birds of Conservation Concern in Ireland 4: 2020-2026, Gilbert *et al*. 2020) – bar-tailed godwit (*Limosa lapponica*), black-tailed godwit (*Limosa limosa*), common scoter (*Melanitta nigra*), curlew (*Numenius arquata*), dunlin (*Calidris alpina*), golden plover (*Pluvialis apricaria*), goldeneye (*Bucephala clangula*), grey plover (*Pluvialis squatarola*), grey wagtail (*Motacilla cinerea*), kestrel (*Falco tinnunculus*), kittiwake (*Rissa tridactyla*), knot (*Calidris canutus*), lapwing (*Vanellus vanellus*), meadow pipit (*Anthus pratensis*), oystercatcher (*Haematopus ostralegus*), pochard (*Aythya ferina*), purple sandpiper (*Calidris maritima*), razorbill (*Alca torda*), redshank (*Tringa totanus*), redwing (*Turdus iliacus*), shoveler (*Spatula clypeata*), snipe (*Gallinago gallinago*), stock dove (*Columba oenas*), swift (*Apus apus*), yellowhammer (*Emberiza citrinella*).

Forty two Amber-listed bird species (as per Birds of Conservation Concern in Ireland 4: 2020-2026, Gilbert *et al.* 2020) - arctic tern (*Sterna paradisaea*), black guillemot (*Cepphus grylle*), black-headed gull (*Chroicocephalus ridibundus*), common guillemot (*Uria aalge*), common gull (*Larus canus*), coot (*Fulica atra*), cormorant (*Phalacrocorax carbo*), fulmar (*Fulmarus glacialis*), goldcrest (*Regulus regulus*),

great crested grebe (*Podiceps cristatus*), great northern diver (*Gavia immer*), greenfinch (*Chloris chloris*), herring gull (*Larus argentatus*), house martin (*Delichon urbicum*), house sparrow (*Passer domesticus*), lesser black-backed gull (*Larus fuscus*), light-bellied brent goose (*Branta bernicla hrota*), linnet (*Linaria cannabina*), mallard (*Anas platyrhynchos*), mediterranean gull (*Ichthyaetus melanocephalus*), merlin (*Falco columbarius*), mute swan (*Cygnus olor*), pintail (*Anas acuta*), red-breasted merganser (*Mergus serrator*), red-throated diver (*Gavia stellata*), ringed plover (*Charadrius hiaticula*), sand martin (*Riparia riparia*), shag (*Gulosus aristotelis*), shelduck (*Tadorna tadorna*), skylark (*Alauda arvensis*), spotted flycatcher (*Muscicapa striata*), starling (*Sturnus vulgaris*), swallow (*Hirundo rustica*), teal (*Anas crecca*), tufted duck (*Aythya fuligula*), turnstone (*Arenaria interpres*), whooper swan (*Cygnus cygnus*), wigeon (*Mareca penelope*), willow warbler (*Phylloscopus trochilus*)

One invasive bird species: ring-necked parakeet *(Psittacula krameria)*

The proposed development site is dominated by recolonising bare ground, and buildings and artificial surfaces which offers limited foraging habitat for birds.

The treelines habitat along the proposed development site boundaries provides suitable nesting habitat for local common passerine species, which are of local importance (higher value).

Bats

According to NBDC map viewer (2 km grid square O24A), the only bat species recorded within approximately 2 km of the proposed development site is soprano pipistrelle (*Pipistrellus pygmaeus*)

The proposed development site is in an area of moderate habitat suitability for bats (Lunday *et al.* 2011). According to NBDC map viewer (1km grid square O24A), the closest mapped bat roost is a soprano pipistrelle roost recorded in 2005 that overlaps with the proposed development site.

The treeline along the boundaries of the proposed development is dominated by immature willow with some light ivy cover, this habitat would only offer low potential for roosing bats. The treelines provide suitable foraging and commuting habitat for local bat population.

All bat species in the area are of national importance.

Non-volant mammals

During the field study, a mammal trail was recorded in the southwest corner of the site, while a small mammal burrow was identified close to the treeline habitat on the western boundary of the site.

According to NBDC map viewer (2 km grid square O24A), the following mammal species were recorded within approximately 2 km of the proposed development site:

- One terrestrial mammal – hedgehog (*Erinaceus europaeus*)
- One invasive species – rabbit. (*Oryctolagus cuniculus*)

The proposed development site is dominated by recolonising bare ground and buildings and artificial surfaces, which offers limited foraging habitat for mammal species such as hedgehogs, badger and otter, however, treelines within the proposed development site, may provide suitable foraging habitat for hedgehogs and badger (national importance).

Other taxa

A live common frog was recorded during the field study. The recolonising bare ground, and buildings and artificial surfaces within the proposed development site offer limited foraging habitat for common frog.

According to NBDC map viewer (2 km grid square O24A), the following protected fauna species were recorded within approximately 2 km of the proposed development site:

- harlequin ladybird *(Harmonia axyridis)*

4.2.1.4 Impacts of the Development

Construction Phase

Designated Sites for nature conservation

The assessment of potential impacts on European sites arising from the proposed development is fully assessed and presented in the AA Screening report submitted as part of this planning application.

The AA Screening concluded that there is no potential for likely significant effects on any European site (including the Baldoyle Bay SAC and SPA), with particular regard to their conservation objectives, either alone or in combination with other projects or plans.

The Baldoyle Bay pNHA overlaps with the Baldoyle Bay SAC and SPA and is designated for the same Qualifying Interests. As such there is also no potential for a significant negative effect on this pNHA, or any other nationally designated site.

Habitats and Protected/Rare Plant Species

The habitats present within the proposed development site valued as being local importance (lower value) are not Key Ecological Receptors and are therefore not assessed further. Only those habitats of local importance (higher value) or above are assessed further below; i.e. treelines and eroding/upland rivers (Clonshagh Stream).

Minor tree trimming will be required to facilitate access to the southwest of the site. The roadside of the treeline, as it runs along the R139 may be subject to trimming along it's vertical face, similar to existing trimming required under Road Safety Authority and Dublin City Council guidance. Therefore, there will be no significant effects to treelines at any geographical scale.

During construction, increased levels of sedimentation, suspended solids and/or pollutants in surface water runoff may enter the Clonshagh Stream. Therefore, in the absence of mitigation there would be potential for significant effects on the Clonshagh Stream at a local scale.

Species

Birds

Considering the suboptimal nature of the recolonising bare ground, and buildings and artificial surfaces habitats to support bird species, and the availability of similar, and often more suitable, habitat in the wider area, no significant effects to birds are predicted due to the loss of recolonising bare ground, and buildings and artificial surfaces.

There is potential for the proposed development to result in disturbance to nesting and foraging local common passerine species using the treelines onsite. However, given the limited suitable habitat onsite and the availability of suitable habitat in the wider area, disturbance to local passerines will not result in a significant effect on local bird populations at any geographical scale.

Minor tree trimming will be required to facilitate access to the southwest of the site. The roadside of the treeline, as it runs along the R139 may be subject to trimming along it's vertical face, similar to existing trimming required under Road Safety Authority and Dublin City Council guidance. The proposed development will not result in the loss of breeding bird habitat, as all treelines will be retained. As part of the proposed development a Biodiversity Enhancement & Management Plan has been produced which will create new suitable habitat for local passerines.

Bats

Only minor tree trimming will be required to the southwest of the site to facilitate access. The roadside of the treeline, as it runs along the R139 may be subject to trimming along it's vertical face, similar to existing trimming required under Road Safety Authority and Dublin City Council guidance. These trees were assessed has having a low suitability for roosting bats. No trees with bat roost potential will be felled during construction. Therefore, there will be no direct impact to roosting bats.

The construction of the access road to the southwest of the site and construction of the substation compound to the north of site may lead to temporary increased levels of light disturbance. Construction activity will be largely limited to after sunrise and before sunset during the peak bat activity months (April-September), see Table 3-3. Increased levels of light during construction on treelines may reduce the suitable foraging and commuting habitat for bats in the surrounding area. In the absence of mitigation, there would be a short-term significant effect to bats at a local scale.

As part of the proposed development a Biodiversity Enhancement & Management Plan has been produced which will create new suitable habitat for bats.

Non-volant mammals

There were non-descript signs of mammal activity recorded during the field visits with small mammal burrows and mammal tracks recorded on site. However, the site offers limited hedgehog and badger foraging habitat. Given the availability of similar, and often more suitable, grassland habitat in the wider area, no significant effects to hedgehog or badger are predicted due to the loss of recolonising bare ground, and buildings and artificial surfaces. The treelines within the proposed development site will be retained and will not result in the loss of

suitable supporting habitat for hedgehog or badger. Considering the suboptimal nature of the habitats onsite, and the availability of other suitable supporting habitat in the wider area, no significant effects on hedgehog or badger is considered at any geographical scale during the construction phase. As part of the proposed development a Biodiversity Enhancement & Management Plan has been produced which will create new suitable habitat for hedgehog and badger.

Other Taxa

The site's recolonising bare ground, and buildings and artificial surfaces provide limited foraging habitat for common frog and it is therefore likely that the record of frog during the ecology visit in April 2025 was incidental. There is no suitable breeding habitat within the boundary of the proposed development. As such, no significant impacts on common frog are considered at any geographical scale during the construction phase.

Operational Phase

Designated Sites for nature conservation

As outlined in the AA Screening report, given the nature and scale of the proposed development site as well as the existing environment there is no potential for impacts on designated sites during the operation of the proposed development.

Habitats and Protected/Rare Plant Species

There will be no removal of hedgerows and treelines during the operational phase of this development. These habitats will be subject to infrequent trimming only will be trimmed on a two- or three-years cycle in rotation. This will allow some sections to produce flowers each year. Trimming will only be required for safety and work access reasons.

The maintenance measures of proposed habitat enhancement features hedgerows, treelines and wildflower areas are outlined in Section 4.2.1.6.

There will be no habitat loss/damage to the Clonshagh Stream during the operation phase of the proposed development and as such no mitigation is required.

No further habitat loss is proposed during the operation of the proposed development, therefore there is no potential for significant effects on habitats or protected/ rare plant species at any geographical scale.

Species

Birds

Maintenance of treelines along access roads will be required during the operational phase. Any trimming of these treelines during the active bird breeding season (i.e. March to August inclusive) could result in the increased risk of mortality and/or injury to common breeding passerine bird species that may be utilising the habitat. In the absence of mitigation, there could be a significant effect to nesting birds at a local scale.

Bats

The plant will not have permanent staff, with only periodic engineering checks and maintenance visits, and security lighting of the compound area limited to these periods. However, increased levels of light during this period could lead to a significant effect to foraging or commuting bats at a local scale.

Non-volant mammals

As the plant will not have permanent staff, with only periodic engineering checks and maintenance visits, and security lighting of the compound area limited to these periods. Therefore, there is no potential for impacts on hedgehog or badger during the operational phase of the proposed development.

Other taxa

There are no potential impacts on common frogs or any other taxa envisioned during the operational phase of this development.

4.2.1.5 Mitigation Measures

Construction Phase

Designated Sites for Nature Conservation

There is no potential for impacts on designated sites during the construction of the proposed development and as such no specific mitigation measures for the protection of designated sites are required.

Habitats and Protected/Rare Plant Species

Standard construction control measures such as silt traps and silt fences will be installed prior to construction and inspected daily to ensure there is no risk of silt-laden and/or contaminated surface water runoff arising from the proposed development. There is also a terrestrial buffer between the proposed development and the surrounding watercourses (including the Clonshagh Stream) i.e. all proposed works are set back at least 10 m from the watercourses, with any excavations setback at least 25 m from watercourses with the bankside hedgerows and vegetation to be retained along with a perimeter fence to be installed, which would allow the interception of surface water runoff prior to discharge into the watercourses, and in turn the downstream watercourses.

There is no other potential for impacts on habitats and protected/rare plant species during the construction of the proposed development and as such no mitigation measures are required.

A pre-construction ecology survey will take place before the construction phase commences if 2 years has elapsed since the initial survey has taken place as good practice. These surveys will identify any newly established ecological constraints (such as the presence of invasive species) within the vicinity of the proposed development.

Species

Birds

The removal of vegetation will not take place within the breeding bird season. The construction phase of the proposed development will not result in the loss of breeding bird habitat, as all treelines will be retained. As such there is no potential for impacts on birds during construction and as such no mitigation measures are required.

Bats

Any construction lighting will be reviewed and agreed with an ecologist and will be positioned as to avoid light spill on to potential bat roosting, commuting or foraging sites – i.e. no light spill on to the hedgerows and treelines. *As per Bat Conservation Trust and Institute of Lighting Professionals Guidance 2023,* Luminaries should lack UV elements when manufactured, with LED luminaires used where possible. A warm white light source (2700 Kelvin or lower) will be used, with peak wavelengths higher than 550 nm. Column heights will be considered to minimise light spill. Only luminaires with negligible or zero Upward Light Ratio, and within good optical control will be considered.

Non-volant mammals

There is no potential for impacts on hedgehog or badger during the construction of the proposed development and as such no mitigation measures are required.

A pre-construction ecology survey will take place before the construction phase commences if 2 years has elapsed since the initial survey has taken place as good practice. These surveys will identify any newly established ecological constraints (such as the presence of mammal species) within the vicinity of the proposed development.

Other Taxa

There is no potential for impacts on common frog or any other taxa during the construction of the proposed development and as such no mitigation measures are required.

Operational Phase

Designated Sites for nature conservation

There is no potential for impacts on designated sites during the operation of the proposed development and as such no mitigation measures are required.

Habitats and Protected/Rare Plant Species

There is no potential for impacts on habitats or protected/ rare plant species during the operation of the proposed development and as such no mitigation measures are required.

Species

Birds

Maintenance trimming of existing and proposed hedgerows and treelines during the operational phase will be undertaken outside of the breeding bird season (March 1st to August 31st inclusive). Trimming will only be necessary if required for safety and work access reasons.

Bats

Any external operational lighting will be reviewed and agreed with an ecologist and will be positioned as to avoid light spill on to potential bat roosting, commuting or foraging sites – i.e. no light spill on to the hedgerows and treelines. Luminaries will lack UV elements when manufactured, with LED luminaires used where possible. A warm white light source (2700 Kelvin or lower) will be used, with peak wavelengths higher than 550 nm. Column heights will be considered to minimise light spill. Only luminaires with negligible or zero Upward Light Ratio, and within good optical control will be considered.

Lighting will be limited to the compound area and will only occur during periodic engineering checks and maintenance visits. External security lighting will be set on motion-sensors for as short as possible, i.e. one or two minutes.

Non-volant mammals

There is no potential for impacts on hedgehog or badger during the operation of the proposed development and as such no mitigation measures are required.

Other Taxa

There is no potential for impacts on common frog or any other taxa during the operation of the proposed development and as such no mitigation measures are required.

4.2.1.6 Enhancement Measures

It is proposed to bolster 150 m of existing hedgerows with native whips. The hedgerows will be planted up with native species: hawthorn *(Crataegus monogyna),* blackthorn *(Prunus spinosa),* pedunculate oak (*Quercus robur*), grey willow (*Salix cinerea*), guelder rose (*Viburnum opulus*), dog-rose (*Rosa canina*), and honeysuckle (*Lonicera periclymenum*).

It is proposed that the northern, western, and southern boundary of the proposed development site will be planted with native tree whips (approx. no. 55) (approx. 360 m length), and fastigiata oak *(Quercus robur)* trees (approx. no. 26) (approx. 250 m length). Native species such as blackthorn (*Prunus spinosa*), alder (*Alnus glutinosa*), downy birch (*Betula pubescens*), and wild cherry (*Prunus avium*) will be used. Refer to Biodiversity Enhancement & Management Plan included in this application for full species list.

Hedgerows and treelines will be trimmed on a two- or three-years cycle in rotation. This will allow some sections to produce flowers each year. Trimming will only be required for safety and work access reasons.

It is proposed to manage an area of approx. 218 sqm as GS2 dry meadows and grassy verges. The wildflower areas will be mown once a year in late autumn. Cuttings will be removed from the areas to maintain low fertility levels, thereby reducing grasses from outcompeting the

herbaceous species. Any colonizing woody vegetation such as gorse, elder, and bramble will be removed from these locations during annual mowing.

See Biodiversity and Enhancement & Management Plan which has been prepared to accompany this application.

4.2.1.7 Residual Impacts

Following the implementation of the prescribed mitigation measures, there will be no potential for residual impacts on any sensitive ecological receptors as a result of the proposed development.

4.2.1.8 Cumulative Impact

The large-scale planning applications from the surrounding area, accessed through planning portals and map viewers on ACP, Dublin City Council, and Fingal County Council are included in Appendix B of the AA Screening Report submitted along with this planning application. In summary the large-scale planning applications involve 13 no. residential developments, an electrical grid stabilisation facility, new electricity transmission infrastructure at the existing ESB Belcamp 220 kV substation, an offshore windfarm development, greater Dublin drainage project, Clongriffin to Dublin City Centre bus corridor scheme, 2 no. underground electricity underground transmission infrastructure developments. There are also a number of small-scale developments including construction of single houses, house alterations and extensions, demolitions and retention permissions.

The construction of these developments and the proposed development during the same period of time could potentially act in-combination, resulting in increased levels of contaminated surface water runoff entering the Mayne River, and travelling downstream towards the Baldoyle Bay SAC and SPA. However, following the assessment of these developments it has been concluded that there is no potential for likely significant effects on any European site. This is in consideration that it has been concluded that these developments will not result in likely significant effects on any European sites identified in the available planning documents. In addition, the proposed development itself will not result in any significant increases in contaminated surface water runoff discharging to these Europeans sites. Therefore, in consideration of the information presented above, it is concluded that there is no potential for the proposed development, alone or in-combination with any other plans and/or projects, to result in likely significant effects on any European site, with particular regard to their conservation objectives.

The construction of these developments and the proposed development during the same period of time could potentially act in cumulative effects on sensitive ecological receptors. However, considering the nature and scale of the proposed development, its potential impacts and that all identified potential impacts will be fully mitigated against, no cumulative effects are predicted. In addition, both the Fingal County Council (FCC, 2022) and Dublin City Council (DCC, 2022) development plans emphasise strong themes of environmental protection and biodiversity enhancement, reflecting a shared commitment to safeguarding natural habitats.

4.2.2 Water

The Clonshagh Stream, the nearest watercourse to the site, runs along the northern boundary of the proposed development. This stream forms part of the wider hydrological network that ultimately connects to the Mayne River (WDF Mayne_010, code: IE_EA_09M030500). This

watercourse is located within the 09_17 Mayne_SC_010 sub-catchment and forms part of the wider 09 Liffey and Dublin Bay. The location of the river in relation to the proposed development can be seen in drawing PE492-D327-006-004. The Mayne_010 is considered at Risk under the WFD "*due to Poor ecological status. Nutrients are the significant issue and diffuse urban sources of pollution are the significant pressures*".

Construction Phase

Construction works at their closest will be located c. 14.6 m from the Clonshagh Stream. These works will only involve the connection of the drainage network to the existing sewer as detailed in Section 3.5.2 and in Appendix B. Outside of these works the closest construction works will be located a minimum of 24.6 m from the Clonshagh Stream. These set back distances will ensure maintenance of bank side vegetation and avoid direct impact on the river.

Good practice measures in line with the CIRIA guidance on Environmental good practice on site guide (fifth edition) (C811) will be put in place. Some of these measures are outlined below, along with measures in the CEMP included with the application. These measures will ensure no significant effects on the neighbouring watercourse.

Concrete wash water will be retained on site and prevented from entering drains and refuelling will be undertaken using purposed designed equipment which will be bunded to prevent leaks. Should any fuels or other liquids spill or leak from any vehicles these will be cleaned immediately, and any affected soils excavated and removed. Excavations will be managed using control measures such as bunding areas to prevent surface run-off and protecting drains. The contractor will ensure that measures for the attenuation, de-silting and hydrocarbon interception, where necessary, will be installed for all surface water discharges during the construction phase.

Silt traps will be installed prior to commencement of works and will be inspected daily to inform adaptive management as required. The Contractor shall ensure that procedures are adopted to ensure that the works do not have a negative impact to fish in inland waterways.

If dewatering is required, it will be done in accordance with CIRIA Report C750 Groundwater Control – Design and Practice or equivalent and in accordance with any discharge licence /permit requirements stipulated by the relevant authority. Any leakage of groundwater during excavations will be gathered locally and passed through silt traps prior to discharging to the local network under licence. Further details will be included in the Contractor's CEMP, which can be submitted to the council for agreement prior to construction, if requested.

Operational Phase

Measure outlined in Section 3.5.2 provides a summary of the existing and proposed surface water, foul water, and water supply arrangements will ensure no additional "*diffuse urban sources of pollution*" as a result of the proposed development. For a detailed description of the drainage design, please refer to the ESR included in Appendix B.

Bunds provided for oil containing equipment, along with interceptors provided on the drainage system, will ensure that any spillage of oil is contained on site and cannot escape to any waterbody.

Furthermore, the removal of lands adjacent to the river from agricultural use will slightly reduce the input of nutrients from the as a result of livestock grazing and fertiliser application.

4.2.2.1 Site-Specific Flood Risk Assessment

A Site-Specific Flood Risk Assessment (FRA) for the proposed development has been undertaken by ESB Engineering and Major Projects. The full assessment is included in Appendix C and the conclusions and recommendations are outlined below.

A Site-Specific FRA has been prepared to assess the flood risk associated with the proposed development. Based on this assessment, there is no significant risk of flooding to the proposed development.

The site is located within Flood Zone C for both fluvial and coastal flooding, as defined in the Planning System and Flood Risk Management Guidelines for Local Authorities. The proposed development (substation) is considered appropriate within Flood Zone C and consequently is not subject to a Justification Test.

The proposed site is located outside the modelled flood extents of the Mayne River and is therefore considered to not be at risk of fluvial flooding. Furthermore, the site is not at a risk from coastal flooding or at a risk from groundwater flooding.

Surface water proposals for the proposed development will be developed to mimic the natural drainage patterns of the site in accordance with the Best Management Practices of the Sustainable Drainage Systems (SuDS). The surface water proposals will replicate the greenfield drainage conditions of the site where possible and will not increase the risk of pluvial flooding elsewhere.

4.2.3 Noise Impact Assessment

A Noise Impact Assessment Report (Appendix D) has been prepared to support the planning for the proposed development. The Noise Assessment has been prepared by Stephen Cleary (BA[Mod] MSc MIOA MIEMA CEnv) of Alive Environmental Ltd., who has over 20 years' experience in the area of Noise Impact Assessment.

The proposed development site is situated alongside the R139 between the M1 junction and the junction with the R107 at Clare Hall. The site is adjacent to the Bewley's production facility. Residential properties are located to the south, east and north of the site.

The survey location was selected to be approximately equidistant from the dominant noise source in the area (road traffic noise from R139) and the nearest noise sensitive receptors (located c. 100 m south west of the site).

A baseline noise monitoring survey was completed on the 2nd, 3rd and 12th December 2025 at the proposed site. The survey included separate day and night-time noise monitoring periods. During both surveys, road traffic noise was the dominant noise source.

The main conclusions of the noise assessment are provided below.

The assessment has been conducted on the basis of worst-case assumptions for construction and operational phase noise. This assessment has also been completed against a baseline noise dataset measured during day and night-time periods to determine existing ambient (L_{Aeq}) and background sound levels (L_{A90}) in the study area.

Subject to the appropriate mitigation measures being in place, the proposed development can be constructed and operated without generating any significant noise impact at the nearest sensitive properties.

During the construction phase, a CEMP will be prepared by the Contractor in advance of the commencement of works and will detail all measures and monitoring to ensure that construction noise levels are maintained below the Category B BS5228 noise threshold limits.

Operational phase noise levels from the proposed substation will be substantially below existing background sound levels at the nearest noise sensitive properties and will not generate any significant noise impact at these properties.

4.2.4 Traffic and Transport

The proposed development is located in the townland of Belcamp, on the northern side of the R139, between the M50/M1 junction and the Northern Cross junction with the R107, on the north side of Dublin.

Table 4-1 indicates that, over the anticipated 2.5-year construction period, an estimated total of approximately 1,828 HGV / LGV vehicle movements will occur, with an expected daily peak of 60 movements during the site preparation stage. Most of the deliveries will be during the construction of the groundworks and the foundations for the substation. Civil construction materials will be delivered using standard rigid trucks, low-loaders and ready-mix truck etc.

A maximum daily workforce of approximately 45 personnel is anticipated during the peak construction period, while the average daily workforce is expected to be around 30. The peak is expected to last for short periods only. Temporary construction and parking facilities will be available at the site during the construction phase. No parking of cars by persons associated with the project will be permitted on the public road. Assuming a vehicle occupancy rate of 1.25, this would result in 36 cars during the peak construction period and a daily average of 24.

Table 4-1: Anticipated Construction Traffic from the Proposed 110 kV Substation

Construction Traffic	No. Vehicles	No. of Vehicle Movements
HGV / LGV (Daily Average)	3- over entire duration	6
HGV / LGV (Peak – Month 1&2)	30	60
Construction Workers (Car Daily Average)	24	48
Construction Workers (Peak)	36	72

During the construction stage, potential impacts from traffic and transportation may include, increased vehicle movements associated with construction staff travelling to / from the site, increased HGV and construction plant movements that may result in traffic congestion on roads and increased queuing and congestion.

There will be a requirement for the movement of approx. 4 abnormal loads during the construction phase of the proposed development. The precise load arrangements and delivery methods will not be known until the construction tender stage is completed. Accordingly, specific traffic management requirements and localised arrangements for the delivery of abnormal loads will be identified through the completion of an Abnormal Load Assessment; to

be undertaken by the appointed Contractor(s) and agreed with in advance of construction with the appropriate reviewing authorities.

During the operational phase, traffic will be limited to occasional maintenance visits to the substation. This is expected to average two to four vehicles per month, with a maximum of three vehicles per week, representing only a minor change from existing traffic levels. All vehicles accessing the site will be accommodated within designated parking areas inside the substation premises, with no parking permitted on the R139.

The proposed entrance road has been designed to provide adequate sight lines in both directions at the junction of the site access with the R139, ensuring that vehicles entering and exiting the proposed development can do so safely. The layout of the proposed entrance and the associated sight lines is shown on drawing PE492-D327-006-003.

A Construction Traffic Management Plan (CTMP) will be prepared by the Contractor in advance of the commencement of works.

The proposed development will not result in any significant impacts on traffic and transport during either the construction phase or the operational phase. The proposed development does not fall within the requirements specified in Appendix 5: Transport and Mobility Technical Requirements of the Dublin City Development Plan 2022-2028.

The scale and nature of the proposed development are such that they will not generate additional traffic movements beyond existing traffic baselines, nor will they require alterations to existing transport infrastructure. As a result, it is considered that no further detailed assessment of traffic and transport is required.

4.2.5 Cultural Heritage Assessment

A Cultural Heritage Assessment Report (Appendix E) has been prepared to support the planning application for the proposed development. The Cultural Heritage Assessment has been prepared by Martyn Byrne (MA, Dip. EIA Mgmt, MIAI) of Byrne Mullins and Associates.

A detailed field inspection/surface reconnaissance survey of the project route was undertaken in mid-December 2025.

The report provides information with respect to previously identified baseline data and assesses the impact of the proposals on identified sites and areas of Cultural Heritage interest and/or potential. A summary of the main conclusions of the study is summarised below.

Local History (Construction Phase)

There are no significant historical events associated with the proposed development which is located within the historical curtilage of Belcamp Hall/Belcamp College.

It is noted that the existing hedgerow along the eastern boundary, positioned on the line of the civil parish boundary between Coolock and Balgriffin, will be protected during the construction works and bolstered, where necessary, resulting in a Neutral, Negligible Effect with Imperceptible Significance.

Archaeological Heritage (Construction Phase)

In terms of terrestrial archaeological heritage, there are no previously recorded monuments located within the extent of the proposed development, and no surface features of archaeological potential were noted by a review of historic cartographic sources, aerial photographs, satellite imagery or available LiDAR.

A number of features of archaeological potential were detected within the extent of the proposed development by a Geophysical Survey in 2021; however, these were subsequently subject to a programme of Archaeological Testing and proven to be of no archaeological significance.

The SMR record three monuments (SITES CH-1 – CH-3) within the wider defined study, two of which (SITES CH02 and CH-3) were subsequently proven to be of no archaeological interest following a programme of Archaeological Testing and subsequent programme Archaeological Monitoring of topsoil removal associated with a residential development. The SMR Zone of Notification established with respect to the third monument – SITE CH-1 – is located at a distance of 420 m to the north of the northern extent of the proposed development and, consequently, cannot be directly impacted by the subject proposals.

In terms of Underwater Archaeology, there are no previously identified associated sites or features of interest/potential located adjacent the section of the Mayne River which flows west-east outside the northern boundary of the proposed development.

In general, groundworks associated with developments such as that under discussion, particularly excavation works within agricultural lands where only minor ground disturbance works, associated with ploughing, tilling and drainage, may have occurred have the ability to uncover and disturb hitherto unrecorded subsurface features, deposits, structures and artefacts of archaeological interest and potential.

With the adoption and implementation of appropriate mitigation measures, it is considered that any potential impacts can be reduced and/or negated, resulting in a Neutral, Brief Effect with potential slight significance.

Architectural Heritage (Construction Phase)

The subject site forms part of the historic curtilage of Belcamp Hall/Belcamp College and a number of associated structures/features of architectural heritage interest/significance have been identified within the landscaped ground outside the northern extent of the proposed development. (SITES CH-5A – CH-5I; Table 2; Figure 17 of Appendix E); it is considered that none of these features have the ability to be directly impacted by the proposed development due to their location outside the proposed site; in addition, the location of existing security fencing immediately outside the northern site boundary will prevent any accidental access by construction traffic outside this boundary. It is considered that no predicted direct impacts will occur with respect to these structures/sites of architectural heritage interest during the construction phase of the development; the effect can be stated as Neutral.

The Entrance Gateway (SITE CH-5J) along the road frontage of the proposed development forms the southern extent of the Southern Avenue which formerly led from Belcamp Lane to Belcamp Hall/College. The avenue appears to have been established in the later eighteenth century; the entrance appears to have been revised in the later nineteenth or early twentieth

century when the estate had passed to the Oblate Order. The gateway of this time was subsequently demolished in the late 1990s when the existing R139 was constructed and the existing gateway constructed a little further to the north; it is unclear if the existing walls and piers of the entrance, which are constructed of concrete with stone cladding, were reconstituted from the original gates and reconstructed to the original design.

Although they are not of any architectural heritage significance, it is considered that they are of interest from the perspective of the overall historic/architectural landscape of the former Belcamp College estate, given that they are an integral component of the existing curtilage. It is intended to remove the eastern piers of the feature to accommodate a widener entrance, and a new matching pier will be rebuilt a little to the east. Given that the existing entrance feature was constructed in the late 1990s, it is considered that such approach is acceptable, resulting in a Slight, Low Effect with potential slight significance.

It should be noted that the proposed repositioning of the gate piers has been coordinated with a draft masterplan for a large residential development to the west of the site.

Archaeological Heritage (Operational/Post-Construction Phase)

The only proven monument within the overall Defined Study Area is SITE CH-1 (Ring-ditch); this is not extant and was originally identified as a crop mark on satellite imagery. In addition, the centre of the monument, as determined by the programme of archaeological testing undertaken in 2025 is approximately 470m to the north of the proposed development. Consequently, the views or setting of this monument will not be impacted upon completion and operation of the proposed development.

In terms of Architectural Heritage, the subject site forms part of the historic curtilage of Belcamp Hall/Belcamp College and a number of associated structures/features of architectural heritage interest/significance have been identified within the landscaped grounds outside the northern extent of the proposed development. (SITES CH-5A – CH-5I; Table 2; Figure 17 of Appendix E), all of these are located within an area of landscape tree planting and they are generally heavily veiled by such planting and not readily visible from the northern extent of the proposed development ; consequently, it is considered that the views and settings of these structures/features will not be significantly negatively impacted by the development upon construction completion and operation.

In addition, it is noted that the proposed Landscape and Ecological Mitigation Plan (Appendix H) includes for new planting along the northern and western site boundaries, in particular; these will form an additional visual buffer between the proposed constructed elements of the proposals and the features of architectural heritage interest to the north. It is considered that such landscape proposals, in terms of the completion and operation of the development, are of Neutral, Not Significant Effect, with potential slight significance.

4.2.6 Landscape and Visual Impact Assessment

A Landscape and Visual Impact Assessment (LVIA) (Appendix F) has been prepared to support the planning application for the proposed development. The LVIA has been prepared by Macro Works, a well-established landscape consultancy with over 20 years of experience in LVIA services across Ireland.

The LVIA is supported by photomontages (Appendix G) prepared for 3 no. selected viewpoint locations. The mitigation measures are indicated on the Landscape and Ecological Mitigation Plan (Appendix H).

The main conclusions of the LVIA assessment are presented below.

In terms of Landscape Impacts, the proposed substation will have notable physical impacts on the land cover of the site during the construction stage. However, in terms of salient consideration of effects on landscape character during the operational stage, there will be an increase the scale, intensity and diversification of built development within and immediately around the site. It is utilitarian in form and will generate a more industrial and less rural character, however, this is not unfamiliar in the peri-urban surrounds of Dublin City's northern fringe. This area is characterised by urban industrial and transport development as well as considerable electrical infrastructure. For these reasons, the magnitude of landscape effect is deemed to be Medium-low within the immediate vicinity of the site (<500m), thereafter reducing to Low and Negligible within increasing distance as the proposed development becomes a perceptually smaller component of a broader peri-urban landscape.

In terms of the significance of landscape effects, the Medium-low sensitivity of the receiving landscape within the site coupled with the Medium magnitude of effects on landscape character in the immediate vicinity of the site is deemed to result in a Moderate/Negative significance and quality of effect. Due to diminishing magnitude of impacts with increasing distance/context, the significance of landscape effect will reduce to Slight and Imperceptible in the wider portions of the study area, even within the more sensitive coastline setting to the east, as the substation will have no material influence on coastal landscape character.

Visual Impacts were assessed at no. 3 viewpoint locations, representing a range of viewing angles, distances, and contexts but within the immediate area where potential for visibility is greatest. The sensitivity of each of these visual receptors is deemed Medium-low which reflects the generally robust utilitarian nature of this peri-urban landscape context. The significance of visual effect experienced at VP2 prior to mitigation is deemed to be Moderate-slight due to the proposed substation being visible at short distance, albeit through a dense veil of winter trees. This will reduce to Slight once mitigation screen planting partially obscured and softens the view of the proposed substation. Viewpoint VP3 also experiences a pre-mitigation visual effect of Moderate slight and a residual visual effect of Slight due to the fleeting views of the proposed development afforded over the stone wall bordering the regional road R139. The significance of effect at the remaining VP1 is deemed to be Imperceptible due to no views being afforded of the proposed development from Darndale Park.

The proposed perimeter stone faced wall on the west, north and south elevations of the proposed substation has been designed to align with a draft masterplan for a large residential development to the west of the proposed site. This approach ensures visual consistency and supports the long-term community benefit envisaged for the area. Additionally, a dedicated space has been provided along the northern boundary of the proposed site, adjacent to the Clonshagh Stream. This space has been intentionally reserved to facilitate the future development of the active travel corridor, as well as to accommodate any supplementary landscaping works that may be delivered by other parties in due course.

Overall Significance of Effect

Based on the landscape and visual effect judgements provided throughout this LVIA, the proposed Belmayne 110kv substation comprising the substation and grid connection, underground cabling and other ancillary development is not considered to give rise to any significant residual effect.

4.2.7 Waste and Resource Management

Waste management on site will be carried out in accordance with "*Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects*" produced by the Department of Environment, Community and Local Government. Regulations in relation to waste management will be adhered to.

A Resource & Waste Management Plan (R&WMP) will be prepared and implemented by the Contractor. The key principles underlying the plan will be to minimise waste generation and to segregate waste at source.

It is anticipated that some material will be reused onsite, subject to geotechnical and environmental testing, and/or that clean excavated material will be reused offsite (subject to the appropriate permissions). However, for the purposes of assessing the worst-case scenario, it is assumed that all excavated material will be subjected to waste classification and removed offsite to a licenced facility.

Excavated soil and rock will be stockpiled in designated areas only. Stockpile areas will be located and arranged so that risk to receiving water, and other receptors, from silt and contaminants is minimised.

A CEMP will be prepared by the appointed Contractor and will detail the Contractor's requirement to handle, transport and recycle/recover/dispose of waste in a manner that ensures that no adverse environmental impacts occur arising from these activities.

4.3 Summary of Mitigation Measures

This section of the report contains a summary of all mitigation measures and monitoring requirements proposed within this PER and supporting appendices.

Early integration of the engineering design team with the planning and environmental team has enabled the implementation of "mitigation by design" causing many likely significant effects to be eliminated or reduced to an acceptable level during the preliminary design stage.

Following an examination, analysis and evaluation of the significant effects of the project in relation to the receiving environment, additional mitigation measures and monitoring programmes have been recommended which will be fully implemented during the construction and operation phase of the proposed development. Table 4-2 below summarises the mitigation measures recommended within the PER and supporting appendices.

Table 4-2: Mitigation Measures Recommended within the PER

Potential Impact	Summary of Proposed Mitigation
Biodiversity (Section 4.2.1)	
Designated Sites	
Habitats and Protected / Rare Plant Species	Enhancement Measures: It is proposed to bolster 151 m of existing hedgerows with native whips. The hedgerows will be planted up with native species: Hawthorn, Blackthorn, Pedunculate Oak, Grey Willow, Guelder Rose, Dog-Rose, and Honeysuckle. It is proposed that the northern, western, and southern boundary of the proposed development site will be planted with native tree whips (no. 55) (approx. 360 m length), and fastigiata oak trees (no. 26) (approx. 250 m length). Native species such as Blackthorn, Alder, Downy Birch, and Wild Cherry will be used. Refer to Biodiversity Enhancement & Management Plan included in this application for full species list. It is proposed to manage an area of 218 sqm as GS2 dry meadows and grassy verges. Construction Phase Standard construction control measures such as silt traps and silt fences will be installed prior to construction and inspected daily to ensure there is no risk of silt-laden and/or contaminated surface water runoff arising from the proposed development. There is a terrestrial buffer between the proposed development and surrounding watercourses (including the Clonshagh Stream), with all works set back a minimum of 10 m and excavations at least 25 m, while retaining bankside hedgerows and vegetation and installing a perimeter fence. A pre-construction ecology survey will take place before the construction phase commences if 2 years has elapsed since the initial survey has taken place as good practice. These surveys will identify any newly established ecological constraints (such as the presence of invasive species) within the vicinity of the proposed development. Operational Phase Hedgerows and treelines will be trimmed on a two- or three-years cycle in rotation. This will allow some sections to produce flowers each year. Trimming will only be required for safety and work access reasons. The wildflower areas will be mown once a year in late autumn. Cuttings will be removed from the areas to maintain low fertility levels, thereby reducing grasses from outcompeting the herbaceous species. Any colonizing woody vegetation such as gorse, elder, and bramble will be removed from these locations during annual mowing
Fauna	Construction Phase Bats: Any construction lighting will be reviewed and agreed with an ecologist and will be positioned as to avoid light spill on to potential bat roosting, commuting or foraging sites – i.e. no light spill on to the hedgerows and treelines. Luminaries should lack UV elements when manufactured, with LED luminaires used where possible. A warm white light source (2700 Kelvin or lower) will be used, with peak wavelengths higher than 550 nm. Column heights will be considered to minimise light spill. Only luminaires with negligible or zero Upward Light Ratio, and within good optical control will be considered.

Potential Impact	Summary of Proposed Mitigation
	Non-volant mammals: a pre-construction ecology survey will take place before the construction phase commences if 2 years has elapsed since the initial survey has taken place as good practice. These surveys will identify any newly established ecological constraints (such as the presence of mammal species) within the vicinity of the proposed development. <u>Operational Phase</u> Birds: Maintenance trimming of existing and proposed hedgerows and treelines during the operational phase will be undertaken outside of the breeding bird season (March 1st to August 31st inclusive). Trimming will only be necessary if required for safety and work access reasons. Bats: Any operational lighting will be positioned as to avoid light spill on to potential bat roosting, commuting or foraging sites – i.e. no light spill on to the derelict cottage or hedgerows and treelines. Luminaries should lack UV elements when manufactured, with LED luminaires should be used where possible. A warm white light source (2700Kelvin or lower) should be used, with peak wavelengths higher than 550nm. Column heights should be considered to minimise light spill. Only luminaires with negligible or zero Upward Light Ratio, and within good optical control should be considered. Lighting will be limited to the compound area and will only occur during periodic engineering checks and maintenance visits. External security lighting will be set on motion-sensors for as short as possible, i.e. one or two minutes.
Water (Section 4.2.2)	
Sediment	Sediment control in the construction stage is important to ensure that only high quality, treated runoff leaves the site. Silt traps will be installed prior to commencement of works and will be inspected daily to inform adaptive management as required. Other erosion control measures include: • Minimising the area of exposed ground and ensuring excavation will not proceed faster than the rate of construction. • Monitoring of the weather forecast prior to planning excavation works. • Providing impermeable mats (plastic sheeting) as covers to mounded excavated material and open excavations during periods of heavy rainfall. • Any excavated vegetation, soil and subsoil shall be temporarily stockpiled away at least 20m from any watercourse / site drain in order to reduce the potential for entry of suspended solids. • Silt traps / check dams/ timber weirs will be erected on ground sloping towards cut drains and boundary hydrological receptors.

Potential Impact	Summary of Proposed Mitigation
Accidental Release	Concrete wash water will be retained on site and prevented from entering drains and refuelling will be undertaken using purpose designed equipment bunded to prevent leaks. Any fuels or other liquids spill or leak from any vehicles these will be cleaned immediately, and any affected soils excavated and removed. Excavations for service runs will be managed using control measures such as bunding areas to prevent surface run-off and protecting drains. In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed: • All collected waste will be managed in accordance with the Waste Management Act 1996, and associated Regulations. • Fuels, chemicals, liquid and solid waste will be stored on impermeable surfaces. • Refuelling of plant, equipment and vehicles will be carried out on impermeable surfaces or using mobile drip trays where it's not possible to provide an impermeable surface. • All tanks and drums will be bunded in accordance with established best practice guidelines. • Spill kits will be provided at all compound locations and carried by all crews during underground cable installation works. • Concrete chute washout from concrete trucks will only be carried out at designated locations, on a contained impermeable area and with treatment facilities including adequately sized settlement tanks where appropriate.
Flood	The surface water drainage proposals for the proposed development will be developed to mimic the natural drainage patterns of the site in accordance with the Best Management Practices of Sustainable Drainage Systems (SuDS). The surface water proposals will replicate the greenfield drainage conditions of the site where possible.
Noise Impact Assessment (Section 4.2.3)	
Noise – Working Hours	Where construction activity takes place for a development in the vicinity of residential properties, it is standard practice that the activities would operate between the hours of 07:00 and 19:00 on Monday to Fridays, between 08:00 and 16:00 on Saturdays and there will be no activity on Sundays or Bank Holidays.
Noise – Site Hoarding	It is proposed that a noise barrier in the form of site hoarding is erected at the site boundary during the construction phase. Figure 7.1 of Appendix D provides an indicative indication of the location of this barrier (in yellow), which will be refined based on site requirements when a more detailed construction plan is in place. It is proposed that this is a minimum of 2m height with no gaps in it, which will provide noise attenuation of approximately 10dB(A) in the direction of the nearest noise sensitive properties.
Noise – CEMP	A detailed Construction Environmental Management Plan (CEMP) will be prepared and will include a range of measures aimed at reducing the potential construction noise impacts on the nearest receptors to the proposed development site. This plan will address the mode and timing of construction activity in close proximity to the site boundary with the nearest receptors, aiming to reduce the noisiest activities in the vicinity of the boundary of the proposed site. This should also include measures to communicate and coordinate construction phase activities at the nearest boundary to the most affected receptors so as to reduce these

Potential Impact	Summary of Proposed Mitigation
	noise impacts to the lowest possible levels. The detailed CEMP will include the noise threshold limits included in Table 3.2 of Appendix D (BS5228:2009+A1:2014), which must be adhered to throughout the construction phase. On the basis of the noise monitoring survey completed, the lowest noise threshold limits included in this table (i.e. Category B) must be applied for all construction activities. British Standard BS5228:2009+A1:2014 – Noise and vibration control on construction and open sites outlines a range of measures that can be used to reduce the impact of construction phase noise on the nearest noise sensitive receptors. These measures should be applied by the contractor where appropriate during the construction phase of the proposed development. Examples of some of the best practice measures included in BS5228 are listed below: • Ensuring that mechanical plant and equipment used for the purpose of the works are fitted with effective exhaust silencers and are maintained in good working order. • Careful selection of quiet plant and machinery to undertake the required work where available. • All major compressors should be 'sound reduced' models fitted with properly lined and sealed acoustic covers which should be kept closed whenever the machines are in use. • Any ancillary pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers. • Machines in intermittent use should be shut down in the intervening periods between work. • Ancillary plant such as generators, compressors and pumps should be placed behind existing physical barriers, and the direction of noise emissions from plant including exhausts or engines should be placed away from sensitive locations, in order to cause minimum noise disturbance. Where possible, in potentially sensitive areas, acoustic barriers of enclosures should be utilised around noisy plant and equipment. • Handling of all materials should take place in a manner which minimises noise emissions. • Audible warning systems should be switched to the minimum setting required.
Traffic and Transport (Section 4.2.4)	
Traffic	It is considered that there are no predicted impacts with respect to traffic and transport regarding the proposed construction and post-construction/operational phases of the proposed development. A Construction Traffic Management Plan (CTMP) will be prepared by the Contractor in advance of the commencement of works. This can be agreed with DCC in advance of construction, if requested. Parking arrangements and other traffic mitigation measures and / or restrictions will be specified in the CTMP. All signage will comply with Chapter 8 of the 'Department of Transport Traffic Signs Manual' August 2019. Temporary signage will be provided indicating site access route for personnel and associated suppliers. Where multiple vehicles may be entering and exiting a site, a spotter will be put in place to direct construction traffic onto the road and appropriate signage placed on both sides of the site.

Potential Impact	Summary of Proposed Mitigation
Cultural Heritage Assessment (Section 4.2.5)	
Local History	It is noted that the existing hedgerow along the eastern boundary, positioned on the line of the civil parish boundary between Coolock and Balgriffin, will be protected during the construction works and bolstered, where necessary. Consequently, no mitigation measures, from the perspective of local history, are deemed necessary.
Archaeological Heritage	Based on the *OPR Practice Note PN03: Planning Conditions (October 2022)* are considered appropriate*:* 1. The developer shall engage a suitably qualified archaeologist (licenced under the National Monuments Acts) to monitor all topsoil stripping required of the development. The use of appropriate machinery to ensure the preservation and recording of any surviving subsurface archaeological remains shall be necessary. No subsurface work shall take place in the absence of the archaeologist without his/her express consent. 2. Should archaeological remains be identified during the course of archaeological monitoring, all works in the area of archaeological interest shall be suspended, pending a decision of the Planning Authority, in consultation with the National Monuments Service, Department of Housing, Local Government and Heritage. 3. The developer shall facilitate the archaeologist in recording any remains identified. Any further archaeological mitigation measures specified by the Planning Authority, following consultation with the National Monuments Service, shall be complied with by the developer. 4. Following the completion of all on-site archaeological interventions and any necessary post-excavation specialist analysis, the Planning Authority and the National Monuments Service shall be furnished with a final archaeological report describing the results of the monitoring and any other archaeological investigations/interventions that might subsequently have been required. All resulting and associated costs shall be borne by the developer. 5. The CEMP shall include the location of any and all archaeological constraints relevant to the proposed development. The CEMP shall clearly describe all identified likely/potential archaeological impacts, and all mitigation measures to be employed to protect the archaeological heritage environment during all phases of site preparation and construction activities.
Architectural Heritage	It is considered that none of these features have the ability to be directly or visually impacted by the proposed development due to their location outside the site and their topographical settings. Consequently, no mitigation measures are deemed necessary with respect to these structures and features. It is proposed that the Entrance Gateway along the road frontage of the site will be widened; such works will require the removal of the eastern piers and a new matching pier will be rebuilt a little to the east. Given that construction/reconstruction of the gateway was undertaken in the late 1990s, and the methodology to be employed, it is considered that no mitigation measures are required of this component of the development.

Potential Impact	Summary of Proposed Mitigation
Landscape and Visual Impact Assessment (Section 4.2.6)	
Mitigation by Design	The main mitigation by avoidance measure employed in this instance is the siting of the proposed development in a productive industrial landscape that is heavily influenced by anthropogenic activities. Retention of existing hedgerow boundaries within and around the site aids visual screening and maintains the existing field pattern. In this respect, the proposed substation is not perceived to impose itself on the existing landscape pattern.
Retaining Existing Hedgerow & New Boundary Hedgerow	The colour scheme of the building has been chosen to help anchor the building within their surrounding landscape. The building has a staggered pattern of Goosewing Grey (RAL 080 70 05) on the upper half and Olive Green (RAL 6003) on the lower half. The light grey of the upper half helps blend the building with the sky so as not to appear incongruous and stark in the urban setting, while the Olive green will blend with the proposed mitigation planting outlined below further anchoring the building in the landscape. It is also proposed to bolster existing perimeter and internal hedgerows with under-planting and inter-planting of whip transplants (i.e. Hedgerow Type 1 - see Figure 1.9 of Appendix F) in order to ensure dense and consistent screening of the site in perpetuity. This will be undertaken where required to thicken and fill gaps in the existing hedgerow network prior to the construction phase, thus allowing for any growth in the period between a grant of planning permission and construction of the development. Advanced nursery stock in the form of 8-10cm girth trees will be used to fill any noticeable gaps and plant species will be selected to complement the existing broadleaf hedgerow species mix around the site and will be of local provenance. Where not already exceeded by existing vegetation, it is intended to manage hedgerows up to 3-4m in height. This height will be achieved by a combination of allowing lower sections of existing hedgerows to mature, filling obvious gaps with advanced nursery stock and providing an additional line of whip planting to selected hedgerows that require densification. It is also proposed to plant new 'Type 2' hedgerows (Figure 1.10 of Appendix F), with whips and a high proportion of advance nursery stock trees (c.3m planted height), along the boundaries of some of the proposed parcels to further screen the proposed development from some of the nearest surrounding receptors. All of this planting will be allowed to mature up to a maintained height of 3-4m to aid in the screening and softening of the proposed development from nearby dwellings and surrounding local and regional roads. The combination of consolidated and proposed 3-4m high hedgerows and native thicket (c.8-10m high) will further reduce the potential for visual impacts within the surrounding area. There will be a further screening effect. Overall, a reduction in potential visibility is noted throughout the immediate study area. Existing hedgerow field boundaries, which will have been maintained and reinforced with additional planting during the construction and operational phases, will remain intact following the restoration phase. Indeed, due to the supplementary planting proposed as part of the landscape mitigation the field boundaries are likely to be more consistent and consolidated than they are at present.

Potential Impact	Summary of Proposed Mitigation
	The mitigation measures are indicated on the Landscape and Ecological Mitigation Plan (Appendix H).
Waste and Resource Management (Section 4.2.7)	
Waste	A R&WMP will be prepared and implemented by the Contractor. The key principles underlying the plan will be to minimise waste generation and to segregate waste at source. The following general measures will be applied on site: • Disposal of construction waste will be to licensed disposal facilities. • On-site segregation of waste will be provided by the Contractor using skips for timber, metal, general waste, and recyclables. • All waste will be removed from site by one or more waste haulage Contractor(s) who hold a current valid Waste Collection Permit issued by the NWCPO. • All waste taken from site will be sent to suitably authorised waste facilities for disposal or recovery. Any stockpiles of hazardous or potentially hazardous waste soils created as a result of the proposed development must be correctly and appropriately managed. Stockpiles must be stored on an impermeable surface to avoid cross contamination. Furthermore, the stockpile must be covered with polyethene plastic or similar to avoid run-off.

4.3.1 Implementation of Mitigation Measures

ESB intends to appoint a Contractor(s) to undertake each phase of the works. The mitigation measures set out in the PER have been incorporated into an Outline Construction Environmental Management Plan (oCEMP) for the proposed development (under separate cover).

The CEMP sets out the minimum requirements which will be adhered to during the construction phase of the project. The CEMP will form part of the Contract Documents for the construction stage to ensure that the Contractor undertakes the works required to implement the mitigation measures.

5 Planning Policy Context

This section outlines the relevant national, regional and local plans and policies which relate to the development of electrical infrastructure at this site.

5.1 National Planning Policy

5.1.1 National Planning Framework First Revision and the National Development Plan Review 2025

Project Ireland 2040 is the overarching policy guiding the sustainable development of Ireland. This policy is comprised of the National Planning Framework (NPF) First Revision, which sets out a vision for the social and economic growth of the nation to 2040, and the National Development Plan (NDP) Review 2025, which attributes funding to projects which achieve the goals of the NPF.

The development of Ireland's electricity grid is a key part of the NPF, coming under National Strategic Outcome (NSO) 8: *Transition to a Carbon Neutral and Climate Resilient Society*. It is recognised within this NSO that it will be imperative that the national grid is developed and upgraded to accommodate increasing levels of demand and supply, a key element reiterated under National Policy Objective 71:

National Policy Objective 71: *Support the development and upgrading of the national electricity grid infrastructure, including supporting the delivery of renewable electricity generating development.*

The NDP sets out funding priorities for national, regional, and local projects based on the NSOs outlined in the NPF. Investment priorities for the Irish electricity grid are outlined in the NDP in Chapter 5.8. The NDP outlines that investment in grid infrastructure will enable ESB and EirGrid *"to significantly increase capital investment to expand electricity transmission and distribution network infrastructure*". The importance of infrastructure development in achieving the wider goals of the NDP and NPF is outlined in Chapter 8.5 of the NDP:

"...this infrastructure is required to underpin the development of all other economic and social infrastructure we need to function as a society. It is also vital to enable the development of the 300,000 homes we need to meet the Government's housing target, and to support our economy's competitiveness."

The proposed development supports the goals and overall direction of the NPF and NDP and will contribute to a low carbon economy, economic growth, and security of supply.

5.2 National Sectoral Policies

5.2.1 Climate Action Plan 2025

Electricity has a challenge ahead to achieve a 75% reduction in emissions by 2030, based on a 2018 baseline and its success has knock-on implications for other sectors in reaching their target. Achieving the target heavily relies on the continued deployment of renewable energy generation and supporting electrical grid infrastructure enhancements. The plan outlines the importance of strengthening the grid connection to achieve the goals for the electricity sector:

"This represents an immense challenge as the sector not only has a requirement to reduce emissions, but also to meet the increasing electricity demand required for our economy, ensuring the energy security of the State, and supporting those sectors which are decarbonising through electrification."

The Climate Action Plan 2025 (CAP25) refers to a need for improvements to grid infrastructure which will enable a renewables-led system to radically reduce emissions in the electricity sector, protect our energy security, and ensure our economic competitiveness. CAP25 signifies support for the development of electricity grid enhancements, in order to allow greater capacity on the grid to support the transition to greater renewable generation capacity. The proposed development will be in line with CAP25.

The support for the construction of new and upgrades to existing electricity grid infrastructure outlined in the CAP25, is echoed in the revised NPF and NDP. The proposed development will contribute to the direction within the national planning policies to transition to a low carbon economy while supporting national social and economic development.

5.3 Regional Guidelines

5.3.1 Eastern & Midland Regional Assembly – Regional Spatial & Economic Strategy 2019-2031

The Regional Spatial and Economic Strategy (RSES) is a strategic plan and investment framework to shape the future development of the Region to 2031 and beyond. It identifies regional assets, opportunities and pressures and provides appropriate policy responses in the form of Regional Policy Objectives (RPOs). At this strategic level it provides a framework for investment to better manage spatial planning and economic development throughout the Region.

Chapter 10 of the EMRA RSES highlights the need for improved electricity infrastructure in the region:

"A secure and resilient supply of energy is critical to a well-functioning region, being relied upon for heating, cooling, and to fuel transport, power industry, and generate electricity. With projected increases in population and economic growth, the demand for energy is set to increase in the coming years." (RSES, pg. 224)

The RSES cascades from the themes in the NPF and again reiterates the need to develop the grid in the Dublin region to facilitate the predicted growth in the region and provide security of supply for future industry:

"The Dublin Region is the major load centre on the Irish electricity transmission system. Approximately one third of total demand is located here, similarly the Eastern Region is a major load centre on the Irish transmission system... Developing the grid in the Region will enable the transmission system to safely accommodate more diverse power flows from renewable generation and also to facilitate future growth in electricity demand. These developments will strengthen the grid for all electricity users, and in doing so will improve the security and quality of supply. This is particularly important if the Region is to attract high technology industries that depend on a reliable, high quality, electricity supply." (RSES, Pg. 224)

The proposed development directly supports the policy set out in the RSES, specifically RPO 10.22:

> ***Energy Infrastructure - RPO 10.22:*** *Support the reinforcement and strengthening of the electricity transmission and distribution network to facilitate planned growth and transmission/ distribution of a renewable energy focused generation across the major demand centres.*

The RSES emphasises the importance of Dublin City and the role it plays in reinforcing the regional and national economy. The site of the proposed development is located in the Dublin Metropolitan Area (DMA). Chapter 5 of the RSES contains the Dublin Metropolitan Area Strategic Plan (MASP) which provides a 12-to-20-year strategic planning and investment framework for the DMA. The MASP highlights Belmayne/Clongriffin as a strategic development area. Enabling infrastructure, such as the energy distribution and transmission network, is highlighted as the key to unlocking the development capacity of the strategic development lands.

Regional Policy Objective 5.1 is particularly relevant:

> ***Enabling Infrastructure - RPO 5.1****: Support continued collaboration between infrastructure providers, state agencies and local authorities in the metropolitan area to inform cross sectoral investment plans and capital spending plans to accelerate the development of strategic development areas and secure the best use of public lands in the Dublin Metropolitan Area.*

By investing in the grid infrastructure in North Dublin City, ESB are supporting the future development of the region in line with the policies set out in the RSES.

5.4 Local Policies and Objectives

5.4.1 Dublin City Development Plan

The Dublin City Development Plan 2022-2028 (DCDP) is the relevant planning policy document for this proposal. Following on from the themes set out in the National and Regional level plans, the DCDP outlines how Dublin City will develop sustainably in order to improve the quality of life for its citizens while also encouraging growth and attracting investment from industry. Chapter 9 of the DCDP is discussed in more detail below, as it is especially relevant to the development proposal.

Chapter 9 Sustainable Environmental Infrastructure and Flood Risk

9.5.12 Energy Utilities

As indicated in the DCDP, Dublin City Council acknowledges that Dublin City is a "*major energy demand centre."* As such, "*the Council will support energy utility providers in their efforts to deliver, reinforce and strengthen existing electricity and natural gas transmission/ distribution grid infrastructure, electricity interconnection and electricity storage in order to ensure security of electricity supply and support the growth of renewable electricity generation."*

A reliable energy supply is essential for economic growth, and energy plays a key role in attracting new industries. The DCDP states the following: *"The development of low carbon, resilient, reliable and indigenous energy sources and networks is recognised as very important to supporting the social and economic development of Dublin, especially if the City is to fulfil its role as a digital connectivity hub which attracts high technology industries."*

The following Development Plan policies support the proposed development in principle:

> ***S149 Support for Energy Utilities*** *- To support the development of enhanced electricity gas supplies, and associated transmission and distribution networks, to serve the existing and future needs of the City, and to facilitate new transmission infrastructure projects and technologies including those to facilitate linkages of renewable energy proposals to the electricity and gas transmission grid that might be brought forward in the lifetime of this Plan. In this respect, the City Council will have regard to the 'Guiding Principles' for facilitating the provision of energy networks set out by the Eastern and Midland Regional Assembly Regional Spatial and Economic Strategy (2019-2031).*
>
> ***S150 Undergrounding of Energy Utility Infrastructure*** *- To require that the location of local energy services such as electricity, telephone and television cables be underground wherever possible, and to promote the undergrounding of existing*

overhead cable and associated equipment, where appropriate, in the interests of visual amenity and facilitating compact urban development.

***S151 Renewable Energy Use and Generation** - To promote renewable energy generation, use and storage at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.*

The proposed development directly supports the achievement of policies S149, S150 and S151 above, by reinforcing the electrical infrastructure in Dublin. Upgrading of infrastructure is required to cater for the increased electrification of sectors such as transport and housing.

5.4.1.1 Land Use Zoning

In the DCDP, the proposed site is zoned as Z14 Strategic Development Regeneration Area 1 Clongriffin/Belmayne and Environs. See Figure 5-1 below.

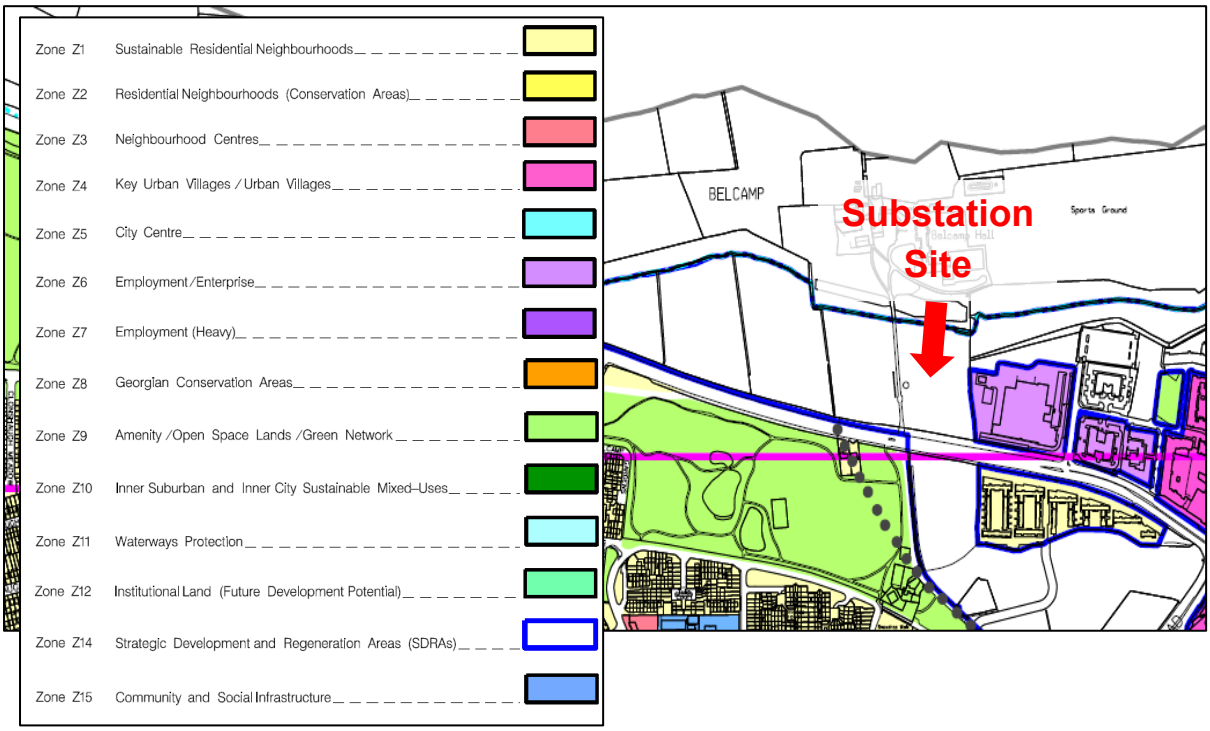

Figure 5-1: Land Use Zoning Map (DCDP 2022-2028)

The land use zoning objective for Z14 lands is as follows:

***Land-Use Zoning Objective Z14**: To seek the social, economic and physical development and/or regeneration of an area with mixed-use, of which residential would be the predominant use.*

Chapter 14 of the DCDP sets out the appropriate uses on each land use zone. 'Public Service Installations' are listed as a permissible use on Z14 lands and therefore the proposed substation development is permitted in principle.

5.4.1.2 Strategic Development Regeneration Areas

The proposed development will also have regard to Chapter 13 of the DCDP which sets out the overarching framework and guiding principles for the designated Strategic Development Regeneration Areas (SDRAs). SDRA designated lands are capable of delivering significant quantities of housing and employment for the city. Services and infrastructure such as a substation would be required to deliver this.

The proposed development is within SDRA 1 comprising of Clongriffin/Belmayne Environs. Table 5-1, reproduced from the DCDP, presents the SDRA 1's estimated residential capacity and associated supporting infrastructure.

Table 5-1: SDRA 1 Residential Capacity & Infrastructure Overview

SDRA Ref.	City Area Name	Estimated Capacity	Area (ha)	Supporting Infrastructure
SDRA 1	Clongriffin/Belmayne Environs	6,950 – 7,350	52	Dart+, BusConnects, Completion of Main Street, Social Infrastructure

In addition to the SDRA 1 specific policies and objectives, *Policy SDRA01* applies to all proposals within SDRAs. Some relevant points from *Policy SDRA01* are as follows:

> ***"Policy SDRA01***
>
> *It is an objective of DCC to:*
>
> *To support the ongoing redevelopment and regeneration of the SDRA's in accordance with the guiding principles and associated map; the qualitative and quantitative development management standards set out in Chapter 15; and in line with the following overarching principles:*
>
> ***Architectural Design and Urban Design**: All development within the SDRAs must be of the highest architectural quality and adhere to the key architectural and urban design principles set out in Chapter 15 in order to create long term, viable and sustainable communities aligned with the principles of the 15- minute city.*
>
> ***Access and Permeability:** Development proposals should ensure adequate permeability and connectivity to surrounding neighbourhoods and public transport infrastructure through the provision of high quality, accessible public realm and high-quality walking and cycling infrastructure. Access and layout should accord with the principles of DMURS (Design manual for Urban Roads and Streets).*
>
> ***Urban Greening and Biodiversity:** Development proposals within the SDRA must ensure the integration of greening and biodiversity measures including high quality public open space as well as micro greening measures including green walls, green roofs, parklets etc. In general, unless otherwise specified under a separate LAP/SDZ Planning Scheme/other statutory plan policy/objective or site-specific guiding principle, a minimum of 10% public open space should be provided as part of all development proposals in SDRAs. A financial contribution in lieu of same will only be considered in exceptional circumstances.*

***Surface Water Management**: All development proposals should provide for sustainable surface water management including climate change provisions and the installation of sustainable drainage systems (SuDS) in order to reduce surface water runoff and potential flooding. This should be considered in conjunction with open space design and green infrastructure, biodiversity initiatives and nature based solutions. See Appendix 11, 12 and 13 for further detail.*

***Flood Risk:** All development proposals within the SDRA's will have regard to restrictions / measures to mitigate identified flood risk outlined in the Strategic Flood Risk Assessment (SFRA) and in particular, Appendices A, B and C including climate change provisions in the SFRA.*

***River Restoration:** Opportunities for enhanced river corridors are applicable to the following Strategic Development and Regeneration Areas (SDRAs) in order to harness significant opportunities for river restoration where feasible: **SDRA 1 Clongriffin/Belmayne and Environs**; SDRA 3 Finglas Village Environs and Jamestown Lands; SDRA 4 Park West/Cherry Orchard; SDRA 5 Naas Road; SDRA 6 Docklands; SDRA 7 Heuston and Environs; SDRA 9 Emmet Road; SDRA 10 North East Inner City and SDRA 16 Oscar Traynor Road. See Chapter 9, Policy SI12 for further detail."*

DCC also outline some site-specific guiding principles for SDRA 1. In the DCDP, DCC state that *"the overall vision of the lands is to facilitate a highly sustainable, mixed use neighbourhood, centred on key public transport interchanges, with a distinct identity and sense of place."* The proposed development is located on 'Phase 6 lands' as show in Figure 5-2.

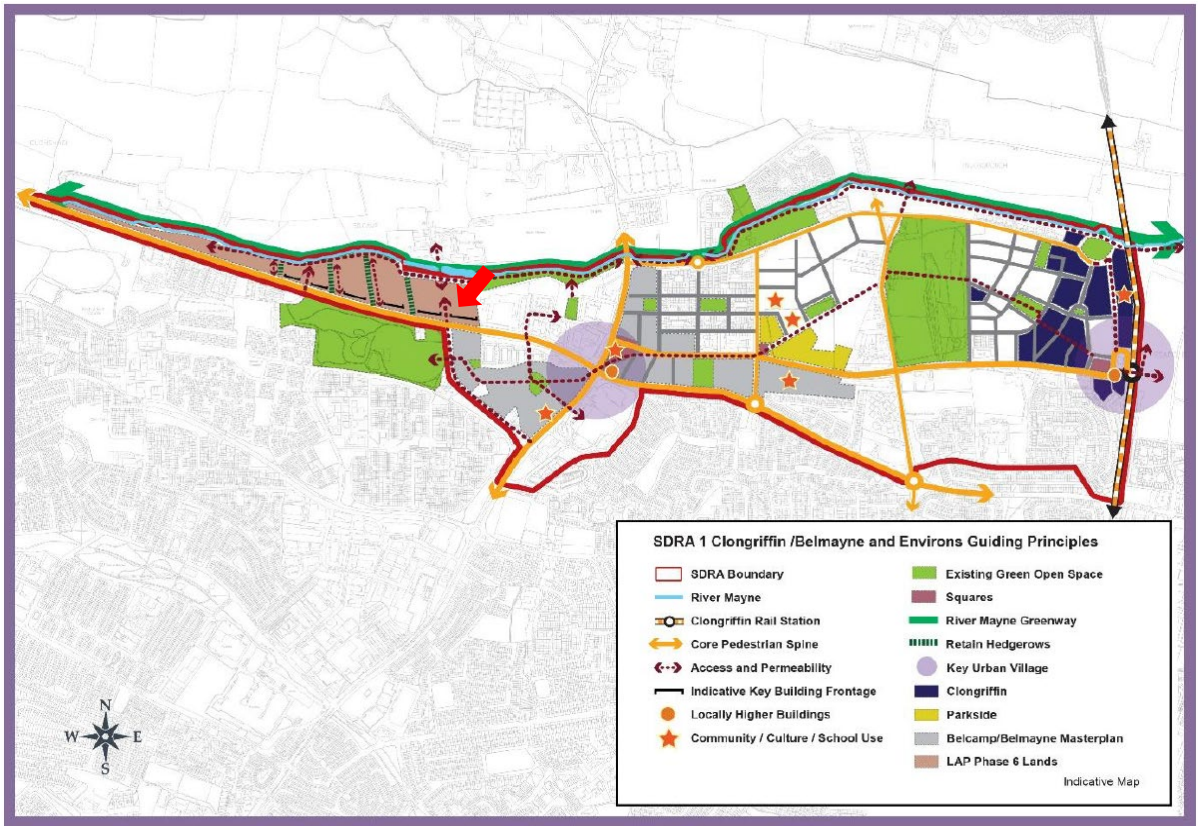

Figure 5-2: Guiding principles for SDRA 1 - Clongriffin/Belmayne and Environs (DCDP 2022-2028)

The guiding principles for SDRA 1 are outlined on pg. 415-418 of the DCDP. Some key points which are relevant to the proposed development are as follows:

"Urban Structure

- *To ensure that the future development on the Phase 6 LAP lands to the east, north of the R139, are considered in the context of the wider development of the Belcamp lands in Fingal County Council. Development shall provide connectivity, including pedestrian and cycle links. Development proposals will be required to facilitate the provision of the River Mayne Greenway, providing links to the east, and associated riparian strip / linear park. Existing hedgerows on the subject lands shall be retained and incorporated into the design and layout of future developments and be situated within the public realm.*
- *Provision of the River Mayne Greenway and Linear Park in order to link the SDRA lands to the existing/proposed coastal greenway, part of the strategic East Coast Trail, proving a key amenity corridor, facilitating walking and cycling, while protecting and enhancing the biodiversity value of this corridor.*

Height

- *Any proposed height must have regard to existing neighbourhoods and character, in order to protect residential and visual amenity.*

Green Infrastructure

- *The Belmayne-Belcamp Green link and River Mayne Greenway / linear park will provide key strategic green links connecting the SDRA to surrounding areas, enhancing the biodiversity value of existing green infrastructure, while integrating SUDS features.*
- *Existing hedgerows on the Phase 6 LAP lands form important biodiversity corridors and shall be retained and incorporated into the public realm of any future development proposals.*
- *Tree planting, landscaping and SuDS features will be integrated into the urban structure and movement framework for the SDRA lands. Key green links shall provide additional landscaping in order to accentuate their strategic importance as amenity, sustainable movement and biodiversity corridors.*
- *All future developments shall comply with the SuDS Strategy outlined in the 2020 Masterplan."*

Development in the Context of SDRA 1

The proposed development supports the ongoing redevelopment and regeneration of SDRA 1. It has been designed in line with the guiding principles of SDRA 1, specifically the requirement for SuDS, biodiversity enhancement, retention of existing hedgerows and landscaping. Figure 5-3 below shows the proposed development in the context of SDRA 1 and the developments proposed in the area.

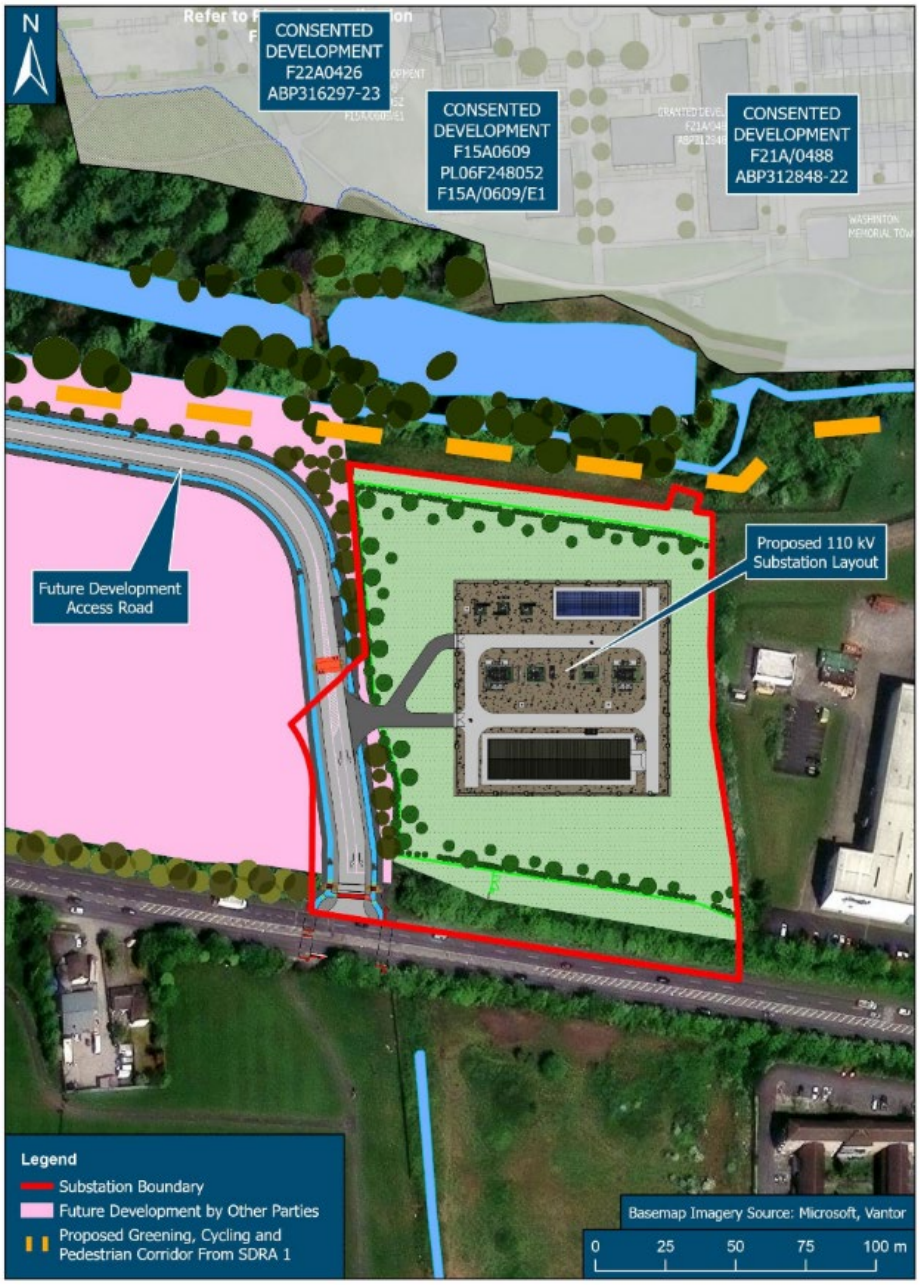

Figure 5-3: The Proposed Development in Context

The proximity of the proposed development to the Mayne River and Greenway is noted. The proposed development would not impact negatively on the amenity of the Greenway or the river corridor. The substation will be screened from the Greenway as noted in the LVIA which accompanies this planning application.

6 Planning Assessment

6.1 Compliance with National Energy Policy

As noted in Section 5, the development of Ireland's electricity grid and supporting infrastructure is a significant feature of national, regional, and local energy policies. Reinforcing the grid both at national and local level will enable the achievement of objectives relating to ensuring a

secure supply of energy to support population and economic growth. The Climate Action Plan 2025 (CAP25) refers to a need for improvements to grid infrastructure which will allow for the management of greater electricity demand and will support the electrification of crucial energy utilising sectors such as transport and heat. CAP25 signifies support for the development of electricity grid enhancements, in order to allow greater capacity on the grid to support the transition to wider decarbonisation and electrification across the economy. The proposed development will be consistent with CAP25.

6.2 Implementing National Planning Policy

Project Ireland 2040 highlights to the need for upgraded infrastructure throughout both the NPF and the NDP. Chapter 3 of the NDP expresses national support for upgrades to the electricity grid (NDP pg. 37): The reliability of electricity supplies will be strengthened through investment in the electricity transmission and distribution grid.

Reinforcing the grid and ensuring security of electricity supply is considered a national level priority in the NDP (pg. 125): *"Security of energy supply - Energy supply is vital for the proper functioning of society and the economy. Over two million customers rely on the electricity grid and 700,000 customers on the natural gas grid to heat and power their homes and businesses. Ensuring continued security of energy supply is considered a priority at national level and within the overarching EU policy framework in which our energy markets operate."*

Ireland's national planning policies outline the need for continued investment in infrastructure to keep up with projected growth in population and industry. The proposed development would constitute investment in the electricity grid and would therefore align with national planning priorities. The proposed development will aid in the transition to a low carbon economy while supporting national social and economic development.

6.3 Implementing Regional Spatial Economic Strategy

The RSES provides a strategic framework to guide development in the Eastern and Midland region. The strategy recognises that investment in the electricity grid is essential to ensure security of supply and bolster the network in the region to keep up with growing demand. The RSES calls out Dublin as its major load centre and highlights the importance of aligning growth with enabling infrastructure. The strategy recognises that timely investment in infrastructure is required in order to facilitate development in the strategic development lands, such as the lands at Belmayne. The proposed development would directly support RPO 10.22 by providing an increased capacity in the area and greater security of supply. The proposed development, which seeks to provide a new 110 kV substation in North Dublin City will create the capacity for future development where at present there is pressure on the grid.

6.4 Implementing Dublin City Development Plan Policies and Objectives

The proposed development will improve electricity network in the Clongriffin/Belmayne area, provide greater security of supply and take pressure of the existing grid which is nearing capacity. The proposed substation is ideally located in an SDRA where the main objective is to cater for significant growth in residential and employment capacity. The proposed development will enable growth in the locality and directly support the development of SDRA 1. The proposed development also aligns with the zoning objectives of these Z14 lands. DCC

have listed 'utility Installations' as a permitted use on these lands and therefore the proposal is acceptable in principle.

The proposed development, which seeks to enhance the electricity network in North Dublin City, directly supports policies S149, S150 and S151 in the Development Plan. DCC recognise the importance of maintaining an electricity grid which can cater for current and future needs. With current demand and forecasted increases in demand, developments such as the proposed substation are crucial in Dublin which is a major user of electricity.

The proposed development has been designed in line with DCC development management standards and the SDRA Guiding Principles in Chapter 13 of the Development Plan. The function of the substation dictates the design; however, measures have been taken to ensure the proposed development will not impact negatively on the receiving environment or impact residential amenity. The development has been designed in accordance with SUDs with the proposed surface water drainage replicating greenfield drainage conditions where possible. Biodiversity and landscaping measures have also been integrated into the proposal with additional planting proposed.

Delivery of projects such as the proposed development are essential for Dublin as the continued electrification of transport and heating and proposals will require improvements to the electricity transmission and distribution system. The provision of a new substation at this location will unlock the potential of these lands which are earmarked for major residential development in the future.

7 Planning and Environmental Conclusions

The project for which planning consent has been sought is called the "Belmayne 110kV/38MW Distribution Substation". ESB is seeking permission to facilitate construction and commissioning of the new substation. For the purposes of the planning application ESB is acting in its capacity as licensed owner of the distribution system.

The existing Grange 38 kV/MV substation, located to the North of Dublin City, is overloaded. There is currently no available capacity to accommodate additional demand arising from new housing developments or associated commercial and retail projects in the area that will require connection over the next few years.

The objective of this project is to add capacity and improve distribution security of supply for the North Dublin area. This will be achieved by taking power from the existing Belcamp 220 kV substation, located approximately 1 km northwest of the proposed development and transforming the voltage down to 38 kV for connection to the distribution network. This will relieve existing transformer capacity at the Grange 38 kV substation.

Substation facilities and associated distribution equipment, such as the proposed development, are increasingly common features within Ireland's urban landscape. As the proposed substation is located in an urban setting, it will be appropriately screened to ensure effective integration with its surroundings.

National policy emphasises the need for continued investment in distribution network infrastructure to accommodate growing populations. The electrification of new sectors will also drive the increased demand for electricity. The RSES specifically references the importance of strengthening and expanding the electricity grid in the Dublin Region. In addition, the DCDP

sets out the Council's commitment to supporting energy utility providers, such as ESB, in their efforts to deliver, reinforce and enhance existing electricity, distribution grid infrastructure and electricity interconnection in the Dublin Region.

The characteristics of the proposed development are compatible with the stated objectives and policies of the DCDP and present no conflicts in terms of the land use zoning, which is Z14 Strategic Development Regeneration Area 1 Clongriffin/Belmayne and Environs.

The proposed development does not fall within any of the classes of development under Part 1 or Part 2 of Schedule 5 of the Planning and Development Regulations 2001 (as amended). As it is not a Schedule 5 development, sub-threshold EIA provisions do not apply, and an EIA is not required. Nevertheless, this planning application is supported by a non-statutory PER to ensure that appropriate planning requirements and any potential environmental impacts to the receiving environment are considered.

The following environmental topics have been comprehensively addressed within the PER: Biodiversity; Water; Noise; Traffic and Transport, Cultural Heritage, Landscape and Waste Management. The likely significant effects arising from the construction and operation of the proposed development were assessed against relevant environmental and planning criteria. This PER and appended assessments have demonstrated that the proposed substation will not give rise to any significant planning or environmental effects.

Early integration of the engineering design team with the planning and environmental team has enabled the implementation of "mitigation by design" causing many likely significant effects to be eliminated or reduced to an acceptable level during the preliminary design stage. Where necessary, mitigation measures have been recommended which will be fully implemented. These are detailed in the PER and set out in the outline Construction and Environmental Management Plan.

An Appropriate Assessment (AA) Screening has also been prepared for the proposed development (under separate cover). The AA Screening Report established that the proposed development has no potential for likely significant effects on any European site, with particular regard to their conservation objectives, either alone or in combination with other projects or plans. Therefore, a (Stage 2) Appropriate Assessment is not required for the proposed development.

Having regard to these considerations the proposed development is compatible with the principles of proper planning and sustainable development and should be favourably considered.

Appendix A – An Coimisiún Pleanála SID Determination (January 2026)

Appendix B - Engineering Services Report

Appendix C – Site-Specific Flood Risk Assessment

Appendix D – Noise Impact Assessment Report

Appendix E – Cultural Heritage Assessment Report

Appendix F – Landscape & Visual Impact Assessment

Appendix G – LVIA Photomontages

Appendix H – Landscape and Ecological Mitigation Plan