

Planning Application to An Bord Pleanála

Environmental Impact Assessment Report

**Proposed Electricity Transmission
Development – SID Application**

**Townland of Bracetown, Gunnocks,
Paddingstown, Normansgrove,
Rowan, Portmanna, and Pace, Co Meath**

Non-Technical Summary

Prepared by

**AWN Consulting
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NON-TECHNICAL SUMMARY

1.0 INTRODUCTION

This is the non-technical summary of an Environmental Impact Assessment (EIA) Report prepared by AWN Consulting (AWN) on behalf of EngineNode Ltd ('the Applicant') to accompany a Strategic Infrastructure Development (SID) application to An Bord Pleanála (ABP) under section 182A(1) of the Planning and Development Act 2000 for permission for the Proposed development.

The proposed development is designed to support power demand for the proposed data storage facility which is subject to a separate concurrent application under Meath County Council Reg. Ref: RA191593 and An Bord Pleanála Reg. Ref. ABP-307546-20. It also has capacity to support future development in the local area. The completed data storage development will have a positive impact in the provision of additional capacity in cloud computing and data storage, the demand for which remains high.

The proposed development is located within the townlands of Bracetown, Gunnocks, Paddingtown, Normansgrove, Rowan, Portmanna, and Pace. The application site has a total area of c. 14.35 hectares. (see Figure 1.1)

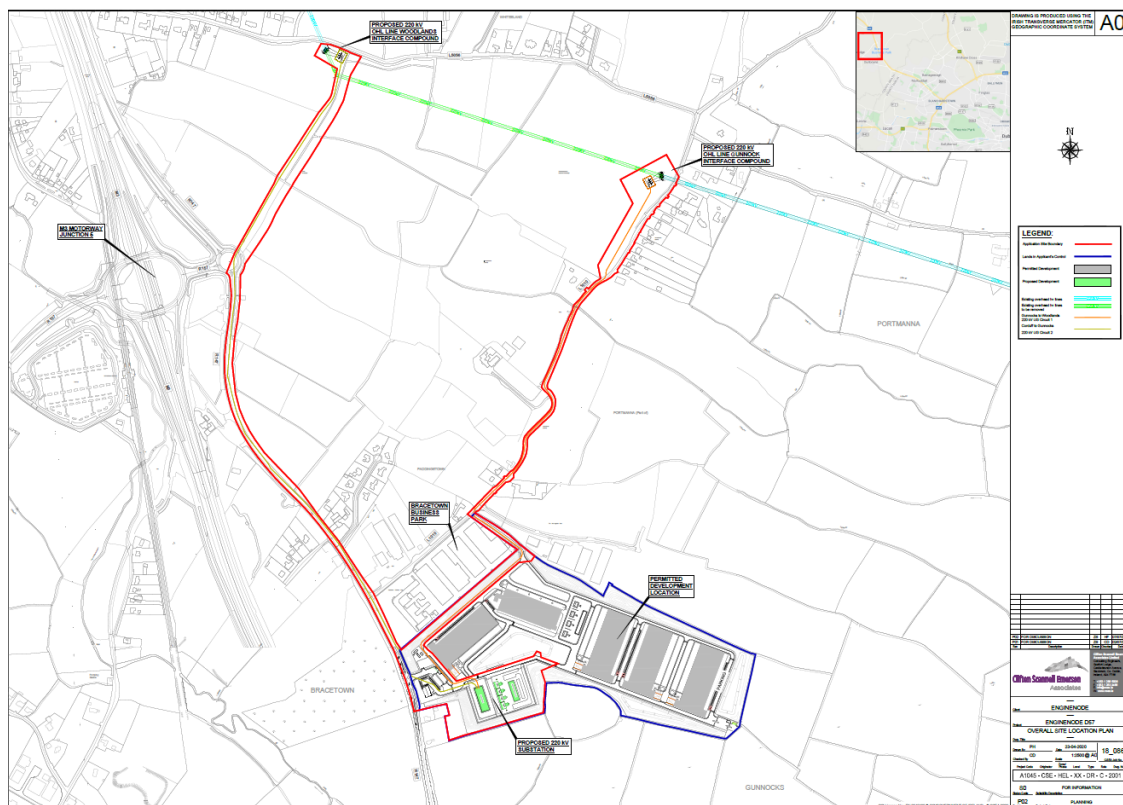


Figure 1.1 Proposed development Lands (Red Boundary)

The majority of the lands are currently zoned for E2 *General Industry and Employment* / E3 *Warehousing and Distribution* in the Meath CDP. A Masterplan (Revision One) has been accepted by Meath County Council (MCC). This plan includes the lands for the proposed data storage development and the permitted expansion of an adjacent datacentre (Runways Information Services Limited) development (MCC Ref: RA180671). The Masterplan area is identified by a green line in Figure 1.2 below and the proposed development is shown by a red boundary.

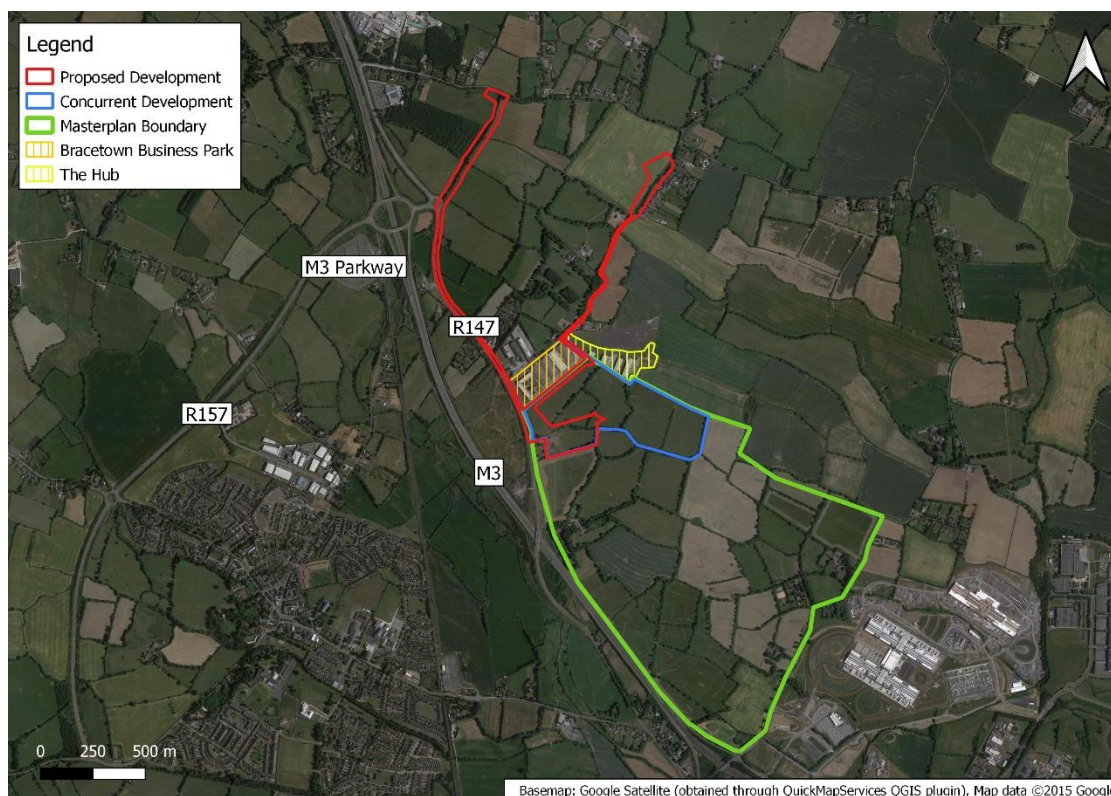


Figure 1.2 Proposed development Lands (Red Boundary) within the Master Plan Area.

Methodology for Preparation of the EIAR

An Environmental Impact Assessment (EIA) is the process of examining the anticipated environmental effects of a proposed project. The Environmental Impact Assessment Report (EIAR) is prepared by the developer and is submitted to a Planning Authority (PA) as part of the Planning Permission process. The national requirements to provide an EIA with a planning application is outlined in the Planning and Development Act 2000 to 2019.

The EIAR describes the findings of the EIA process to the planning authority, statutory consultees, other interested parties, and the public in general about the likely effects of the project on the environment. This is used to assess the environmental effects of the project and, in the context of other considerations, to help determine if consent should be granted and to inform other parties' submissions to the Planning Authority.

The requirement for EIA for certain types and scales of development is listed in Annex I and Annex II of the EIA Directive (2011/92/EU and 2014/52/EU), and transposed into Section 5 (Parts 1 and 2) of the Planning and Development Regulations 2001, as amended.

This EIA Report has been developed in accordance with the most relevant guidance, including:

- EIA Directives (2011/92/EU and 2014/52/EU).
- Planning and Development Act 2000
- Planning and Development Regulations 2001
- Department of Housing, Planning and Local Government, Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018)

- Environment Protection Agency, Guidelines on the Information to be Contained in Environmental Impact Assessment Reports Draft (2017)
- European Union, Guidance on the preparation of the Environmental Impact Assessment Report (2017)
- Environment Protection Agency, Advice Notes for Preparing Environmental Impact Statements Draft (2015)

This report has been laid out using the Grouped Format Structure, the EIA Report examines each environmental aspect in a separate chapter. Each specialist chapter generally covers the following:

- Receiving Environment;
- Characteristics of the Proposed development;
- Potential Impacts of the Proposed development;
- Do-Nothing Scenario;
- Remedial and Mitigation Measures;
- Predicted Impacts of the Development;
- Cumulative impacts; and
- Residual Impacts.

The interrelationships between each environmental aspect are assessed as they occur in each chapter. Chapter 16 of this report shows where interactions have been identified and how they have been addressed. The cumulative impact of the development and the potential cumulative impacts of the proposed development with any/all relevant other planned or permitted developments are discussed in each chapter.

Consultation

Prior to the submission of this application a pre-planning meeting was undertaken with ABP where a range of issues were discussed. This meeting allowed for a discussion on the in scale, nature and extent of the proposed development to ensure the requirements for EIA assessment were included.

Contributors to the EIA Report

The preparation and co-ordination of the EIA Report has been completed by Awn in conjunction with experienced specialists. The role and responsibility of each contributor, their qualifications and relevant experience are detailed in Chapter 1 (Introduction) of the EIA Report.

2.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development primarily comprises the provision of a new 220 kV substation with Gas Insulated Switchgear (GIS) technology and two 220 kV underground transmission cables (connecting to existing 220 kV overhead lines to the north of the proposed substation) along with associated and ancillary works.

The proposed development is described as follows:

The proposed 220 kV GIS substation is to be located on lands at Bracetown and Gunnocks, to the north of Clonee, to the west of the R147 Regional Road, and to the southeast of Bracetown Business Park. The proposed substation is located to the south of a proposed data storage development subject to a separate concurrent application

under Meath County Council Reg. Ref.: RA191593 and An Bord Pleanála Reg. Ref.: ABP-307546-20.

The proposed substation includes the provision of four transformers, a client control building (with a gross floor area of c. 637 sq.m) and a two storey GIS substation building (with a gross floor area of c. 2,430 sq.m) within a 2.6 m high fenced compound.

The proposed 220 kV transmission cables will run from the proposed 220 kV GIS substation, connecting to existing 220 kV overhead transmission lines to the north of the substation site (within the townlands referenced below).

One underground transmission cable circuit (the Gunnocks - Woodland circuit) will proceed from the proposed substation to the east, before following the R147 roadway northwards to an existing roundabout linking the R145 with the M3 motorway. From this roundabout, the circuit proceeds northeast through private agricultural lands, before reaching the Corduff – Woodland overhead line. This circuit will cover a distance of c. 2 kilometres.

The other underground transmission cable circuit (Gunnocks – Corduff circuit) will proceed from the proposed substation to the east, following the perimeter of the data storage facility site northwards, then northeast and exiting onto an existing rural roadway. The route then follows this rural road north-eastward, before reaching the Corduff – Woodland overhead line in private agricultural lands to the west of the roadway. This circuit will cover a distance of c. 1.7 kilometres.

Each of the two circuits will terminate in a cable – overhead interface compound containing air-insulated electrical equipment mounted on concrete plinths. Adjacent to each interface compound, an overhead line tower will be erected to facilitate connection of the new underground cables to the existing 220 kV overhead line. Each new overhead line tower will be approximately 21 metres in height, set on top of concrete foundations.

The development includes a rural supply (75kVA) underground cable which will comprise a looped MV circuit and also enabling works, services diversions, adjacent access paths to serve the proposed transmission cables, connections to the proposed substation, landscaping, security fencing and berms, provision of internal access arrangements and car parking within the substation compound, services, all associated construction works, and all ancillary works.

Further detail on the proposed development, site infrastructure and secondary facilities on the site are provided in Chapter 2 of the EIA Report.

Under the current Draft EPA EIA Report Guidelines 2017, the description of the existence of the project is required to define all aspects of the proposed lifecycle of the proposed development and a full description is included in Chapter 2 of the EIA Report.

Construction

The construction schedule is anticipated to be:

- Application for Planning Permission – July 2020
- Commence Site Construction works (subject to grant of planning permission) – End of Q4 2020,
- Completion of Construction and Commissioning – Q3 2022.

It is proposed that the accesses and haul roads for vehicles, the contractors' compound and fencing that have been planned for the construction of the data storage development will be utilised for the proposed development. The construction compound will facilitate office, portable sanitary facilities, equipment storage, parking etc. for contractors. It will be used for the duration of the works.

The site preparation phase for the GIS substation will involve site clearance, excavations and levelling of the site to the necessary base level for construction, surveying and setting out for structures and any rerouting of services/connections to services.

A combination of bulldozer, excavators, trucks and other soil shifting plant will commence the main site clearance and levelling aspects. The site preparation required for the underground 220 kV cable circuits connecting to the 220 kV transmission line, and the 75kVA cable installation will be limited with minimal site clearance required.

It is anticipated that foundations for the substation will require moderate scale excavations. Due to the shallow depth of bedrock, some rock breaking may be necessary. It is envisaged that all of the spoil generated during site preparation/levelling for the substation will be reused on site while excavated material for the grid lines along roadways will be removed for licenced disposal.

The volume and nature of material to be excavated are estimated as follows:-

Material	Volume (m ³)
Tarmacadam	3,892
Soil/Gravel under Roads	9,127
Soil (Greenfield)	3,744
Trees / Shrubbery	101

Contractors will be required to submit and adhere to a method statement (including the necessary risk assessments) and indicating the extent of the areas likely to be affected and demonstrating that this is the minimum disturbance necessary to achieve the required works.

The outer finishing of the building envelopes are intended to be of a similar quality and appearance to the concurrent developments. Reinstatement along the underground 220 kV cable circuits connecting to the 220 kV transmission line and 75kVA cable installation route will be as current, i.e. grassed in greenfield areas and hardstand along paved areas and roads. The internal road system for access will be completed as part of the data storage development (concurrent application). Landscaping will be undertaken in accordance with the landscape masterplan for the data storage development with some local alterations to the berms at the proposed substation site to enhance the residential amenity of nearby properties (refer to Chapter 11 Landscape and Visual Impact).

Operation

EirGrid will be the transmission system operator and ESB Networks will be the transmission asset owner. EirGrid will operate the proposed new GIS substation, remotely from their control centres. ESB Networks will undertake local operational activities from the substations with only interim inspections along the underground 220 kV cable circuits connecting to the 220 kV transmission line and 75kVA cable installation.

The 220kV GIS substation does not require any full-time staff to operate it. However, maintenance of the substation will be required by ESB Networks, including a routine weekly inspection, and a more comprehensive inspection once per year. The weekly inspection of the GIS substation will take a maximum of 8 hours on a single day and will be conducted by up to 2 staff. In addition to the weekly inspections, more comprehensive maintenance works will take place annually on each cubicle. This will require up to 4 staff to conduct testing at the substation over a maximum period of 15 days (120 hours).

Once constructed, the underground 220 kV cable circuits connecting to the 220 kV transmission line will not require any staff to operate it. Instead, two ESB Networks maintenance staff will carry out a routine inspection of the asset one year after completion and once every three years thereafter.

Traffic relating to staff movements have been assessed as part of the traffic and transportation chapter of this EIA Report (Chapter 13).

3.0 PLANNING AND DEVELOPMENT CONTEXT

The site for the proposed development is situated within the administrative area of Meath County Council (MCC). The relevant national, regional and local MCC planning policy with which the proposed development complies is outlined in Chapter 3.

Section 182A of the Planning & Development Act 2000 (as amended), provides that applications for approval of “development comprising or for the purposes of electricity transmission” shall be made directly to ABP. Consultation with ABP has confirmed that the Proposed development meets the relevant criteria and constitutes Strategic Infrastructure Development (SID) under Section 182A of the Planning and Development Act 2000 (as amended) (ABP Reg. Ref.: ABP-305657-19).

The National Planning Framework (NPF) was published in February 2018 and contains policies which are supportive of the development of ICT infrastructure, with particular reference made to datacentres. National Strategic Outcome 6 of the NPF relates to the creation of “*A Strong Economy Supported by Enterprise, Innovation and Skills*”. This strategic outcome is underpinned by a range of objectives relating to job creation and the fostering of enterprise and innovation. The concurrent development, which comprises ICT infrastructure, is therefore considered to be wholly in accordance with this key body of national planning policy. The proposed development is designed to support power demand for the concurrent data storage development.

The *Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Regional Assembly 2019-2026* (EMRA) includes Regional Policy Objective (RPO) 8.25 which states that the Local Authority shall support the national objective to promote Ireland as a sustainable international destination for ICT infrastructures such as data storage facilities and associated economic activities at appropriate locations.

In addition to this RPO 10.20 supports the development of enhanced electricity and new transmission infrastructure and associated networks, to serve the existing and future needs of the Region and facilitate new transmission infrastructure projects that might be brought forward in the lifetime of this Strategy

It is clear from the above that the RSES supports the development of ICT infrastructures at appropriate locations. The appropriateness of the proposed

development in this location is evident from the grant of permission for nearby similar developments and the recent grant of Ref. RA/191593. by MCC.

The *Meath County Development Plan 2013-2019* (CDP) has defined the majority of the proposed development lands as E2 General Industry and Employment / E3 Warehousing and Distribution, additional lands on the public road and sections of agricultural land have no specific zoning. It is considered that the proposed development accords with this zoning objective and the vision for these zoned lands as set out in the Development Plan.

The Local Area Plan (LAP) for Dunboyne/Clonee/Pace Corridor, includes specific objectives to promote development of the lands in this area. Economic Development Strategy for County Meath 2014-2022.

The Draft Meath County Development Plan for 2020-2026 was published on the 18th of December 2019. Public consultation on the Draft Plan was until March 6th, 2020 and the plan is likely to be adopted by Q4 2020 or Q1 2021.

The key thing of note is that under the Draft Development Plan, the lands on which the proposed new 220kV substation will be located remain zoned E2/E3. The lands to the northwest of the proposed substation site are also proposed to be zoned E2/E3 under the Draft Development Plan (currently unzoned under the 2013-2019 Development Plan). These lands are traversed by the proposed underground cable circuits.

The Economic Development Strategy (EDS) for County Meath 2014-2022 sets evidence-based measures aimed at accelerating the economic transformation, revitalisation and sustainable development of County Meath. The locality of the proposed development within the Dunboyne/Clonee/Pace corridor has been identified as a strategic area for development due to the favourable locations, ready-to-go sites, fibre-based broadband and telecoms, power and gas, water, easy access to the national motorway network and are in close proximity to Dublin Airport Dublin Port.

As part of the assessment of the impact of the proposed development, account has been taken of developments that are currently permitted or under construction within the vicinity of the proposed site.

In conclusion it is considered that the proposed development is in accordance with the policies and objectives of the National Planning Framework, Regional Spatial and Economic Strategy for the Eastern and Midlands Regional Assembly and the Meath County Development Plan.

4.0 ALTERNATIVES

This chapter describes the alternatives that were considered for the proposed development, where applicable, under each of these headings and the reasons for the selection of the chosen options, including a comparison of environmental effects.

Do Nothing Alternative

In the event that the proposed development does not proceed, the proposed data storage development once constructed, would be left without a permanent electrical power supply. There are no environmental effects associated with the do-nothing scenario. The Do-Nothing scenario has been considered in each chapter of the EIAR.

Alternative Project Locations

The proposed substation was located with respect to the overall masterplan for the concurrent data storage facility application. The proposed location is deemed to be the most logical location on the site for such a development to facilitate an independent substation site and facilitate power supply for the development. A number of alternative route options were considered for the 220 kV Transmission Lines as follows:.

- Option A – Double circuit underground line along L1010 (2.2 km) and 2 no HV towers connecting to the Woodland-Corduff overhead line
- Option B – Proposed Route as described in Chapter 2.
- Option C– Double circuit underground line south along the L147 (crossing the Tolka) to the Woodlands Clonee overhead line.

It was concluded that Option A was not feasible due to inadequate space in the narrow L1010 road. A preliminary appraisal of the environmental effects of Options B and C was undertaken as part of the route selection process. Both routes were determined as feasible with minimal short or long-term impacts on the environment. A review of relevant environmental criteria by each specialist showed a preference for Option B based on the potential short-term impacts during construction. This is primarily due to Option C requiring a new river crossing of the Tolka and resulting in greater disruption along the existing roads during construction works. Option B requires crossing a greater length of greenfield area and therefore has potential for short term impact on biodiversity and archaeology (if encountered). It is noted that standard mitigation measures are available to minimise impacts on these receptors.

Alternative Design/Layouts

The proposed GIS substation and cable bays are designed based on requirements stipulated by the ESB Networks. The design of the substation units is centred around the equipment requirements of ESB Networks that are required to provide an efficient and safe service. From a “design and layout” point of view, therefore, the flexibility to select alternative designs and layouts was not available to the Applicant.

Alternative design options considered included above overhead lines; however overground lines require a larger footprint and have a long-term negative impact on the existing landscape and were not preferred.

Alternative Processes

The underground 220kV transmission line will become an integral part of the national high voltage electricity grid which is currently operated by ESB Networks. As such the underground cable installations must meet ESB Network’s strict specifications to ensure it will be seamlessly absorbed into the national grid infrastructure and can provide a reliable power supply. From a “process design” point of view, therefore, the flexibility to select alternative processes for integrating into the current national grid is not available to the Applicant.

Alternative Mitigation

For each aspect of the environment, each specialist has considered the existing environment, likely impacts of the proposed development, and reviewed feasible mitigation measures to identify the most suitable measures appropriate to the environmental setting. The four established strategies for mitigation of effects have

been considered: avoidance, prevention, reduction and offsetting (not required in this development). Mitigation measures have also been considered based on the effect on quality, duration of impact, probability and significance of effects. The selected mitigation measures are set out in each of the EIA Report Chapters 5-15.

5.0 POPULATION AND HUMAN HEALTH

This chapter evaluates the impacts if any, of the proposed development on population and human health. The potential receptors within the environs of the site include other industrial and commercial businesses in the area, as well as nearby residential developments and farms. The southwestern boundary of the development site is shared by residential development.

Overall, it is predicted that there will be a slight positive impact on local business activity and local employment during the construction phase with the increased presence of construction workers using local facilities and indirect positive effects on employment in terms of construction material manufacture.

During construction and decommissioning, there will be short term impacts in relation to noise, dust and traffic. Modelling has been undertaken to confirm the impact on the environment and human health and this is described in the relevant chapter of the EIAR.

The best practice dust mitigation measures that will be put in place during construction of the proposed development will ensure that the impact of the proposed development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the impact of construction of the proposed development is likely to be short-term and imperceptible with respect to human health. The proposed cables will be underground and will have no impact on air quality in relation to human health once operational. In addition, the proposed substation does not have the potential for any emissions which could impact air quality in terms of human health during operation.

Construction noise and vibration will be typically limited to daytime periods only. Health effects are typically associated with long term exposure to elevated levels of noise and/or vibration which will not be the case for the proposed development. Construction sources would be expected to be in the order of or below existing ambient levels in the vicinity of the site for the vast majority of the construction period. There are no health risks associated with operational noise or vibration resulting from the operation of the development.

There is no direct impact on any amenities as a result of the proposed development. As Gunnocks House is located within its own strong woodland setting, and large agricultural fields separate it from the proposed development site, the landscape character in the vicinity of the house will be substantially unaltered.

The proposed development will have no impact on the ability of the local roads, and water and power supplies to service local residential or business users.

The proposed development has the potential for an impact on the health and safety of workers employed on the site, particularly during the construction phase. The activities of contractors during the construction phase will be carried out in accordance with the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I.

No. 291 of 2013) to minimise the likelihood of any impacts on worker's health and safety.

Overall, it is expected that the proposed development in combination with adjacent developments will have a **long term, neutral, not significant impact** by providing employment opportunities and the associated economic and social benefits. This is in line with the planning objectives for the area.

6.0 HYDROLOGY

This chapter of the EIA Report assesses and evaluates the potential impacts of the proposed development on the water and wastewater environment.

The site is drained by the Pace Stream which joins the Pinkeen Stream c. 2.5 river km downstream to the southeast. The Pinkeen Stream joins the River Tolka c. 1 km further downstream which ultimately discharges to north Dublin Bay over 30 km downstream. The most recent published status (www.epa.ie - River Waterbody WFD Status 2010-2015) of the Tolka river, in the vicinity of the proposed development is '*Bad*' and its environmental risk is qualified by the WFD as '*At Risk*'.

The proposed development is outside of any identified flood zones with no risk of fluvial, pluvial or coastal flooding event. The site is located in Flood Zone C and is appropriate for the nature of the proposed development as at low risk of flooding. The proposed data storage facility incorporates adequate attenuation and SUDs measures to ensure there will be no increase in flooding or impact on water quality off site as a result of increased hardstand on the proposed data storage and substation site. There is no requirement for bulk chemical or fuels storage required for the substation and grid development during construction or operation. As such the only potential for an accidental release is from traffic on site and interceptors are included upgradient of the stormwater attenuation pond to ensure water quality is protected at the outfall from the site.

As the site is currently in agricultural use there is no existing infrastructure for water supply or wastewater. The proposed data storage development includes a pumping station to connect the proposed development and adjacent existing Bracetown Business park to the existing Irish Water operated sewer. The minor domestic sewage discharge and water supply discharge from the substation has been included in the overall data storage facility water and wastewater calculation for drainage infrastructure. Consultation has been undertaken with Irish Water in regard to the expected design of the pumping station and expected wastewater discharge and required water supply requirements and a confirmation of feasibility as been provided by Irish Water (Chapter 14 Material Assets).

During construction, the CEMP will incorporate measures for management of silty water within run-off and buffer zones will be retained along any open drainage to minimise potential for blow off or run-off into open streams. During construction the CEMP will also incorporate measures for management of any accidental leaks from construction vehicles or temporary oil storage.

Following implementation of mitigation measures detailed in Chapter 6 of the EIA Report, the predicted impact during construction of the proposed development will be short term, imperceptible and neutral during construction and long term imperceptible and neutral during operation.

7.0 LAND, SOILS, GEOLOGY AND HYDROGEOLOGY

Chapter 6 of the EIA Report assesses and evaluates the potential impacts of the proposed development on the land, geological and hydrogeological environment.

The site is underlain by a *Locally Important* limestone aquifer, Based on the nature and thickness of overburden present vulnerability varies from *high* (at the substation location) to *moderate* across the area traversed by the grid lines (following Geological Survey of Ireland classification). The groundwater body (Dublin GWB) is classified under the Water Framework Directive (WFD) Risk Score system as '*Good Status*' and its risk as '*Not at Risk*'.

The land has historically been used for agriculture and there is no evidence of soil or groundwater contamination based on previous site use or site investigation. Some contamination may be present within the fill materials along the public roads. Any contaminated soil and cover material will be disposed to a licenced facility.

The proposed development is outside of the delineated drinking water protection area for the public water supply for Dunboyne, Clonee and their surrounds which is located c.600m to the west of the site across the M3, i.e. upgradient of the site. There are a number of domestic/agricultural wells in the surrounding lands. There are no areas of geological heritage or groundwater dependent terrestrial ecosystems which have potential to be impacted by the proposed development.

Based on the site geology and the design of the development, no dewatering, or groundwater abstraction is required as part of the construction or operation phase of the proposed development. There is no bulk chemical or fuel storage required for the operation of the development. As a result, the only potential for discharge to ground is an accidental leak during refuelling or localised spill from a vehicle. As described previously, the contractor will be required to operate in compliance with a CEMP which includes measures for management of any accidental leaks from construction vehicles or temporary oil storage. During operation, the trafficked areas of the substation will be primarily covered in hardstand and any accidental leaks from vehicle will be treated within the oil interceptors located upgradient of the attenuation pond to ensure protection of offsite water quality. The absence of any bulk chemical storage and presence of hardstand minimises any potential for discharge to ground and therefore there is a very low risk to the underlying aquifer.

The development will result in a loss of agricultural land due to the change in land use. This is in line with the planning zonation for the area.

Following implementation of mitigation measures detailed in Chapter 7 of the EIA Report, the predicted impact during construction of the proposed development will be *short* term, imperceptible and neutral during construction and long term imperceptible and neutral during operation.

8.0 BIODIVERSITY

This chapter provides an assessment of the impacts of the proposed development in question on the ecological environment, i.e. flora and fauna. The site is not directly adjacent to any areas of national or local environmental sensitivity.

The footprint of the proposed development comprises agricultural grassland fields divided by internal hedgerows and surrounded by outgrown hedgerows. There are no rare or protected habitats recorded in the study area.

Bats were found to use the site for feeding and a badger sett was recorded outside the development area to the southern boundary. The site may be considered of Low Local Ecological Value. There are no predicted significant impacts on local ecology. None of the qualifying habitats or species of the European sites occur under the footprint of the proposed works areas. There is limited connectivity with the River Tolka and it is concluded there will be no indirect impacts on the European sites in North Dublin Bay.

The proposed development is located in an area of low local ecological value and with the employment of normal avoidance measures (seasonal restrictions) with regard to cutting vegetation, there will be no impacts on bats or birds, and the proposed development is predicted to have a neutral and imperceptible effect on biodiversity.

An Appropriate Assessment Screening (Appendix 8.1) was undertaken for the project and concluded:

- The proposed project is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
- The proposed project is unlikely to indirectly significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
- The proposed project, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives.
- It is possible to conclude that significant effects can be excluded at the screening stage.

It can be concluded, on the basis of objective information, and in view of best scientific knowledge, that the proposed project, either individually or in combination with other plans or projects, will have a significant effect on the relevant European sites.

9.0 AIR QUALITY AND CLIMATE

This chapter evaluates the impacts which the proposed development may have on air quality & climate.

Air Quality

In terms of the existing air quality environment, data available from similar environments indicates that levels of particulate matter less than 10 microns and particulate matter less than 2.5 microns (PM₁₀/PM_{2.5}) are, generally, well within the National and European Union (EU) ambient air quality standards.

An assessment of the potential dust impacts as a result of the construction phase of the Proposed development was carried out based on the UK Institute of Air Quality Management (IAQM) guidance. This established the sensitivity of the area to impacts from construction dust in terms of dust soiling of property and human health effects. The sensitivity of the area was combined with the dust emission magnitude for the site under three distinct categories: earthworks, construction and track out (movement of

vehicles) in order to determine the mitigation measures necessary to avoid significant dust impacts.

Once mitigation measures, such as dust and traffic management, are implemented the impacts to air quality during the construction of the proposed development are considered, temporary and not significant, posing no nuisance at nearby sensitive receptors (such as local residences).

There are no potential impacts to air quality during the operational phase.

Climate

Based on the scale and temporary nature of the construction works, the potential impact on climate change and transboundary pollution from the construction of the Proposed development is deemed to be temporary and not significant in relation to Ireland's obligations under the EU 2020 target. There is no impact during operation as there are no emissions from the Proposed development.

Mitigation Measures

A dust minimisation plan will be implemented during the construction phase of the Proposed development to ensure that no significant dust nuisance occurs outside the site boundary, measures include the development of a documented system for managing site practices with regard to dust control, monitoring and assessment of dust. No mitigation is required during operation.

Residual Impacts

If the mitigation measures outlined in this assessment are implemented, there will be no residual impacts of significance on air quality or climate from the construction or operational phases of the proposed development.

10.0 NOISE AND VIBRATION

This chapter assesses the anticipated noise and vibration impact associated with the proposed development at nearby noise sensitive locations.

The existing noise climate has been surveyed at nearby noise sensitive receptors over the course of typical day and night-time periods. Road traffic movements, both distant and local, were noted as the most significant source of noise during both daytime and night-time periods. Other noise sources included aircraft activities and other typical noise sources expected in a suburban environment (e.g. pedestrian activity, dogs barking, distant plant noise etc.)

During the construction phase of the proposed development there will be some impact on nearby noise sensitive properties due to noise emissions from site activity and traffic. The application of noise limits and limits on the hours of operation, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact is kept to a minimum. The resultant impact is slight negative and short term.

The primary sources of noise during the operational phase of the proposed development include the introduction of additional building services plant for general site operation (i.e. sub stations), additional building services plant (i.e. emergency

generator for sub stations) for emergency site operation and the introduction of additional vehicular traffic on existing public roads. Proprietary noise and vibration control measures will be employed in order to ensure that emissions from building services plant do not exceed the relevant criteria at nearby noise sensitive locations. The resultant noise impact is imperceptible to moderate, negative and long-term while being within all adopted noise criteria.

No significant sources of vibration will be present during the operational phase. There are therefore no predicted vibration impacts at neighbouring dwellings during the operational phase. The resultant vibration impact is *imperceptible, neutral and long-term*.

11.0 LANDSCAPE AND VISUAL

The proposed development will be located within a site area that is immediately south of the concurrent application for a data storage development located along the R147, east of the M3 motorway, and c. 1.5km east of the centre of Dunboyne. Currently, and until such time as construction is commenced on the data storage development, the lands are mostly rural and agricultural, comprising a network of arable fields with boundaries of mature hedge-rows, mature and semi-mature trees.

The area also comprises dispersed houses, clusters of houses and farm buildings, as well as the light industrial and commercial units at Bracetown Business Park and The Hub Logistic Park that adjoin the proposed development site. At c.1.0km to the southeast, the first phase of the Facebook facility has been constructed and comprises a large scale data storage facility set in high quality landscaped campus. Construction of the second phase of that facility is well advanced, and will extend the Facebook facility westwards towards the proposed development site.

Following commencement of construction of the data storage development, the emerging high tech built developments will have begun to substantially transform the agricultural character of the locality to a high tech campus character extending from the Bracetown Business Park to the established Facebook facility to the east.

The proposed development will introduce an additional building compound element into the landscape context, but within the larger grouping of built elements forming the data storage development. The perimeter landscape treatment, together with existing layers of field boundary hedgerow and tree planting and the emerging data storage development, will limit visibility of the proposed development to partial and intermittent views.

From the agricultural areas to the north, and within the Dunboyne settlement, the proposed substation development will be substantially screened by either the existing intermediate landscape or the data storage development giving rise to imperceptible neutral effects on landscape character.

From closer vantage points to the west and south of the development site, including from along the R147, on the elevated embankment of the R147, and on the nearby M3 motorway, the substation will be partially visible in the context of the data storage development, giving rise to moderate neutral effects on landscape character. From Bracetown Business Park and The Hub Logistics Park, impacts will be negligible as the substation will be substantially screened by the intervening data centre development.

During construction, potential impacts of the substation development will arise from site disturbance and clearance, excavation and ground works, construction vehicles and plant, material import, the emergence of new structures, and site landscaping. Construction activity will be similar in nature to that on the adjoining data storage development site. In relation to construction of the underground transmission cables, potential impacts will be temporary and will be similar to that of many roadworks activity, with rolling construction areas and associated traffic management arrangements. Construction activity will be an intensification of that of the larger and more extensive concurrent data storage development, and impacts will be short term, and ranging from slight/moderate to moderate and neutral, depending on relative proximity to the development site.

On completion, there will be an additional building compound element present within the context of the larger and more extensive data storage development. From the northern agricultural areas, and from the areas around Dunboyne, it is considered that the landscape and visual impact during operation will range from *imperceptible* to *moderate*, and will be *neutral*. In closer proximity along the R147, the proposed development will be more distinct from the data storage development, but will present as an additional component of the wider development, leading to *moderate* and *neutral* landscape and visual effects.

Mitigation of landscape and visual impacts are inherent in the architectural design, massing and composition of the built elements on the site, and in the perimeter and internal site landscaping, and the same approach is applied to the proposed development as was applied to the larger concurrent data storage development. The development will be part of the wider high quality contemporary industrial buildings composition set within an attractive landscaped campus environment. The proposed development includes some localised modifications to the perimeter landscape berms of the data storage development, including setting back the western perimeter berm from the private dwellings on the R147.

The lands are zoned for development as proposed and the scheme provides for an appropriate and high-quality response to the permitted land use.

12.0 ARCHAEOLOGICAL, ARCHITECTURAL AND CULTURAL HERITAGE

This chapter assesses the predicted impacts of the proposed development on archaeological, architectural and cultural heritage using a number of sources including the Record of Monuments and Place, the Meath County Council Development Plan 2017-2023, the National Inventory of Architectural Heritage, the topographical files of the National Museum of Ireland, the Excavations Database, cartographic and documentary sources.

There are no impacts on recorded archaeological, architectural or cultural heritage sites associated with the proposed development and no sites of archaeological potential were noted during the field survey. The majority of the development works will occur on previously developed land. However, portions are through greenfield and have not been subject to significant development in the past and it is possible that subsurface archaeological features survive.

The construction phase of the proposed development will not impact directly on any sites included in the Record of Monuments and Places. However, it is possible that ground disturbance in greenfield areas will impact on previously unrecorded subsurface archaeological features. As noted above, there is the potential for the proposed

development works to impact on architectural features associated with Normansgrove estate. However, the implementation of mitigation measures detailed in Chapter 12 will ensure that the effect is neutral and imperceptible.

13.0 TRAFFIC AND TRANSPORTATION

This chapter assesses the impact that the proposed development will have on the surrounding road network during construction and operation.

The surrounding road network in the vicinity of the site includes the R147, the CR580, and the M3. The site is currently serviced by Bus and Rail. Bus Eireann services 109, 109B and 105 stops along the R147, just north of its t-junction with the CR580. Rail services operate from the M3 Parkway station, with services to Clonsilla, Docklands and Hansfield.

The potential impact of the proposed development has been considered for both the construction and operational stages based on Transport Infrastructure Ireland (TII) guidelines set out in the Traffic & Transport Assessment Guidelines (2014).

A number of traffic surveys were carried out on the local road network in August 2019, which were factored up in accordance with TII Project Appraisal Guidelines – Unit

5.3: Travel Demand Projections (2016) to establish construction year (2022) and opening year (2022) year traffic flows in the area.

Following this step, and in order to establish baseline (do-nothing) flows, further adjustments were made to these flows to account for approved surrounding development in the area not accounted for in the surveys.

The trip generation of the proposed development during the construction stage was estimated based on construction traffic recorded at a similar substation, transmission line and grid connection development. The construction staging for the proposed development will be such that the worst case construction impact will occur in Q2 2021 when the proposed development is at peak construction.

Therefore, the worst-case construction traffic impact for the proposed development has been assessed for Q2 2021. The impact of the construction phase of the development was found to be short-term, negative and not significant during peak construction.

The operational stage trip generation potential was estimated for the proposed development based on operational traffic recorded at a similar substation, transmission line and grid connection development. The impact of the operational phase of the development was assessed in terms of the traffic impact the proposed development would have on three key junctions located in the vicinity of the site. The traffic impact of the operational phase of the proposed development was found to be long-term, neutral and imperceptible.

14.0 MATERIAL ASSETS

This chapter of the EIA Report evaluates the impacts, if any, which the proposed development may have on Material Assets. The impacts on the various material assets described have been considered in the following chapters of this EIA Report as follows:

- Chapter 5 Population and Human Health;
- Chapter 9 Air Quality & Climate;
- Chapter 12 Cultural Heritage
- Chapter 13 Traffic & Transportation; and
- Chapter 15 Waste Management.

Ownership and Access

The proposed development site is under third party ownership and on public lands. A letter of consent, to apply for development on the lands from the site owner, is included with the planning application.

The R147 assess proposed as a part of this proposal is temporary in nature, pending the development of the distributor road to the east of the site.

Power and Electrical Supply

The proposed 220kV GIS substation and 220kV transmission line are designed to support power demand for the concurrent development. In this instance the nature of the proposed development ensures that rather than utilising electricity, the proposed development will ensure continuity of supply of electricity to the data storage development and environs.

Foul Drainage, and Water Supply

There is currently no surface water, foul drainage or water supply serving the site. The design of the data storage development (concurrent application) allowed for appropriate provision of surface water, foul drainage and water supply services for the proposed development. Irish Water has confirmed that the design as provided can be facilitated.

The foul sewage arising from at the welfare facilities will be collected in a newly constructed foul drainage network within the site and discharged through a new pumping station which will be constructed as part of the concurrent data storage development, to the foul drainage network which runs along the R147 and ultimately discharges to Ringsend WWTP

Water will be sourced from the 450mm diameter mains supply located along the R147. This mains supply has capacity to supply adequate water for the proposed development. The proposed development requires minimal water, and is restricted to general potable supply for drinking, sanitary facilities and cleaning for the small number of temporary staff attending the substation.

The proposed 220kV transmission line and associated cable development will not require the provision of surface water, foul drainage or water supply.

Detailed water supply and drainage design information is provided in the *Engineering Planning Report – Drainage and Water Services*, prepared by CSEA, which accompanies this application and in the *Engineering and Water Services Report*, prepared by CSEA, which accompanied the planning application for the concurrent data storage development (MCC Planning Ref. RA/191593).

Impacts

The proposed development entails minimal use of material assets examined in this chapter (i.e. power and electrical supply, telecommunications, surface water infrastructure, foul drainage infrastructure and water supply) during construction with no impact once operational. The predicted residual impact of the proposed development can be classed as long-term and not significant with respect to material assets.

15.0 WASTE MANAGEMENT

This chapter has been prepared to address issues associated with waste management during the construction and operational phases of the proposed GIS substation and the installation of ducting for the 220kV transmission line development.

An assessment was carried out of the potential impacts associated with resource consumption and waste management during the construction and operational phases of the proposed development. The receiving environment is largely defined by MCC as the local authority responsible for setting and administering waste management activities in the area through regional and development zone-specific policies and regulations.

During the construction phase of the proposed substation and installation of cables, waste produced will include surplus steel and other metal materials and broken/off-cuts of timber, plasterboard, concrete etc. Waste from packaging (cardboard, plastic, timber) and oversupply of materials are also likely to be generated. Where possible, materials will be reused on-site to minimize raw material consumption. Source segregation of waste materials will improve the re-use opportunities of recyclable materials off-site. Site preparation, excavations and levelling works required to facilitate construction of foundations and the installation of services will generate c. 5,500m³ of excavated material. It is currently proposed that all excavated greenfield material will be reused on site. The ground investigation report shows there was no evidence of subsurface contamination encountered during the site investigation works. All excavated material along public roads will be disposed of to a licenced facility.

A carefully planned approach to waste management and adherence to the site-specific Construction and Demolition Waste Management Plan during the construction phase will ensure that the effect on the environment will be medium-term, neutral and imperceptible.

Small volumes of waste will be generated at the proposed GIS substation. No waste will be generated from the operation of the proposed 220kV transmission line. This waste will be generated from the maintenance staff infrequently and will comprise of typical commercial waste types. Waste will be taken as produced from the GIS substation back to the main buildings for disposal in segregated containers by maintenance staff. From there it will be removed off-site for re-use, recycling, recovery or disposal by appropriately licensed waste contractors.

With mitigation in place and a high rate of reuse, recycling and recovery achieved, the predicted impact of the operational phase on the environment will be long-term, neutral and imperceptible.

16.0 INTERACTIONS – INTERRELATIONSHIPS BETWEEN THE ASPECTS

This chapter of the EIA Report addresses potential interactions and inter-relationships between the environmental factors discussed in the preceding chapters. This covers both the construction and operational phase of the proposed development.

In the main, the majority of EIA Report chapters have already included and described assessments of potential interactions between aspects however this section of the assessment presents a summary and assessment of the identified interactions. In summary, the majority of interactions are neutral.