

# Shannon Technology and Energy Park (STEP) Power Plant

Environmental Impact Assessment Report - Volume 2

Chapter 17 Material Assets

Shannon LNG Limited

April 2024

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## 17. Material Assets

### 17.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) assesses the likely significant effects on Material Assets as a result of the Proposed Development. This chapter defines the study area; the methodology used for developing the baseline and impact assessment; provides a description of the baseline environment; and presents the findings of the impact assessment.

Material assets are resources that are valued and intrinsic to the Site and the surrounding area. With regard to Material Assets, the 2022 Environmental Protection Agency (EPA) EIAR Guidelines (“EPA Guidelines”) state: *“Material assets can now be taken to mean built services and infrastructure. Traffic is included because in effect traffic consumes transport infrastructure. Sealing of agricultural land and effects on mining or quarrying potential come under the factors of land and soils.”*

This chapter considers the potential impact to land use and built services as a result of the Proposed Development. Other resources, such as land, soil, water, air, traffic, human health and amenity resources are discussed in the other chapters of the EIAR, and as such are not considered in this chapter, namely: **Chapter 05** (Land, Soils and Geology), **Chapter 06** (Water), **Chapter 08** (Air Quality), **Chapter 11** (Traffic and Transport), **Chapter 13** (Population and Human Health) and **Chapter 16** (Waste Management).

The Site is located in the townlands of Kilcolgan Lower and Ralappane, between Tarbert and Ballylongford, Co. Kerry. The application Site boundary (‘red line’) encloses an area of approximately 41 hectares (ha) and is entirely owned by the Applicant.

A full description of the Proposed Development is presented in **Chapter 02** (Description of the Proposed Development) of this EIAR.

The potential impacts associated with the Proposed Development, if any, are assessed with regard to the following existing land uses, built services and infrastructure (which have not already been addressed elsewhere in this EIAR), and as outlined in the EPA Guidelines (2022):

- Land Use.
- Electricity Network.
- Gas Network.
- Telecommunications.
- Wastewater Services (foul, process and surface water).
- Water supply.

### 17.2 Competent Expert

Peter O’Connor is a Technical Director and Environmental Project Manager with AECOM, responsible for the project management of Environmental Impact Assessment Reports (EIARs) / Environmental Statements (ESs) / and Scoping studies throughout Ireland, Northern Ireland and Great Britain. He is a Chartered Surveyor (MRICS) with over 25 years’ experience in consultancy, he has been responsible for the management and production of a diverse range of planning applications and Environmental

Impact Assessments (EIA / EIAR) throughout the Ireland and the UK for both public and private sector clients including energy and infrastructure projects.

## 17.3 Methodology

There is no specific set of Environmental Impact Assessment (EIA) guidelines for assessing material assets. This assessment was carried out by a desktop study from publicly available information and from information provided by the Applicant to determine the baseline environment existing utility arrangements within the study area which could be impacted as a result of the Proposed Development. The Kerry County Development Plan (CDP) 2022-2028, Aerial imagery (Google / Bing) and Ordnance Survey Ireland, EPA online map viewer, 1:50,000 Discovery Mapping, Google search and previous planning applications on and adjacent to the Site were among the sources of reference material used for this desk study.

Baseline information relating to the Site, surroundings and receptors from a previous planning application and EIAR on the Site (Planning Ref. ABP-311233-21) has been utilised where appropriate and considered to be valid and applicable to the Proposed Development and this assessment.

This chapter and the assessment contained within has been carried out in accordance with the appropriate guidance and methodology (EPA Guidelines (2022)) as outlined in **Chapter 01** (Introduction) (refer to Table 1.2).

### 17.3.1 Legislation and Guidance

The legislation, policy and guidance applicable to the material assets assessment include:

- Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 2014/52/EU (the 'EIA Directive').
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).
- EPA (2022). *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*.
- Institute of Environmental Management and Assessment (IEMA) (2020). *IEMA Guide to Materials and Waste in Environmental Impact Assessment*.
- Kerry Co. Co. (2022). *Kerry County Development Plan 2022-2028*.

### 17.3.2 Study Area

The Study Area is the Site of the Proposed Development, as well as the surrounding area in relation to land use and the utilities network (built services) that have the potential to be impacted by the Proposed Development. Based on potential for impact from the Proposed Development this is considered a reasonable distance in terms of sensitive land uses and built services asset receptors (such as residential receptors) with respect to the Site of the Proposed Development.

### 17.3.3 Desktop Study

A desktop assessment of information provided by the client, previous planning application information, data from site visits and publicly available information was undertaken to determine the baseline utility arrangements and existing land uses within the Study Area which could be impacted by the Proposed Development. Any information obtained through the Site visit is deemed unlikely to have significantly changed within a four-year period as the development area remains undeveloped. This information included:

1. Location and description of existing utilities network.
2. Location and number of properties at risk of demolition, or from which land will be required / access affected by the Proposed Development.
3. Existing land uses in the Study Area.
4. Land registry maps.

For the utilities assessment, the information reviewed included site utility plans and preliminary design information.

The Applicant consulted with EirGrid, the Commission for Regulations of Utilities (CRU), Uisce Éireann, Gas Networks Ireland (GNI) and Electricity Supply Board Networks (ESBN) during the design of the built infrastructure which comprises the Proposed Development.

The Applicant has made the following utility connection requests:

1. A connection request to export up to 600 MW of power to the electricity transmission system. The application was made to EirGrid under the Enduring Connection Process (ECP) 2.1 process in September 2020.
2. A connection request to import up to 10 MW of power from the electricity transmission network. The application was made to ESBN.
3. A connection request to the municipal water supply system. The application was made to Uisce Éireann. It is anticipated that this will be provided along the L1010 road (Coast Road) from Ballylongford to the Site. The water connection does not form part of the scope of this EIAR.

A Connection Agreement for a 600 MW Maximum Export Connection (MEC) was executed with EirGrid in 14<sup>th</sup> April 2023.

### 17.3.4 Limitations and Assumptions

This assessment is based on professional judgement and considers both the adverse and beneficial impacts that the Proposed Development can have upon existing and surrounding receptors in relation to land use and built services. The assessment is based on information available at the time of application submission.

## 17.4 Baseline Environment

### 17.4.1 Land Use

The Site is located on the southern shore of the Shannon Estuary and predominantly comprises grassland, with minimal infrastructure in place, refer to **Chapter 05** (Land, Soils and Geology).

The Site is in a predominantly agricultural area, with the following surrounding land uses noted:

- Immediately to the north is the Shannon Estuary.
- To the east is forestry and agricultural land.
- To the south is agricultural land and the L1010 road, with scattered residential properties.
- To the west is agricultural land and beyond is the coastline.

A number of minor drainage channels are present on the Site, with longer drainage features crossing the proposed access road. A small stream runs in a north-westerly direction through the Site and discharges into the Shannon Estuary. The lands of the Site are under Applicant Ownership and currently leased and in agricultural use, mainly in pasture with some tillage.

According to the Kerry County Development Plan (CDP) 2022-2028, the Site is part of 430.6 ha of land which have access to deep water *i.e.*, up to 23 m and which are zoned as a Strategic Development Location (SDL). This SDL is recognised in the Kerry CDP Development Plan for its potential as an Energy Hub and for industrial development at a regional and national level, refer to **Chapter 04** (Energy and Planning Policy) of this EIAR.

The lands are accessed by the L1010 road. The proposed L1010 road Improvement Scheme incorporates widening a 4.36 km long section of the existing road carriageway to 8 m wide. To date approximately 0.89 km of the upgrade works have been undertaken by Kerry Co. Co.

There are a number of disused and unoccupied buildings within the Site (refer to **Figures F12.2** to **F12.4**, Volume 3), including a derelict set of buildings which now appear to be used as agricultural outbuildings. These buildings will be demolished and removed during the initial phase of the Proposed Development construction works. Refer to **Chapter 16** (Waste Management) for additional information.

### 17.4.2 Utilities

Refer to **Figure F17.1**, Volume 3 for an overview of the proposed 220 kV and medium voltage (10 / 20 kV) cable routes and substations.

#### 17.4.2.1 Electricity Network

There is currently no electricity network infrastructure within the boundary of the Site. The following infrastructure is located nearby, principally under the L1010 road, close to the entrance of the Site.

- High voltage (HV) 220 kV, 110 kV cable route.
- Medium voltage (MV) 38 kV and 20 kV cable route.

There is a HV electricity grid in close proximity to the Site. A 220 kV and 110 kV electrical transmission is available from the nearby Kilpaddoge 220 kV substation approximately 3 km east of the Site.

One electricity generating power station in the vicinity of the Proposed Development is the Tarbert HFO Power Station constructed in the 1960's and historically operating at 620 MW, consisting of four



separate generating units (2 No. x 60 MW oil-fired turbines; and 2 No. x 250 MW oil-fired turbines). The Tarbert Power Station is approximately 6 km from the Site. The Tarbert Power Station is connected to the national grid via a 220 kV substation, on the SSE Tarbert site. The existing Tarbert Power Station is connected to the ESB substation by overhead lines, where power from the Tarbert Power Station is provided to the national electricity transmission grid. Tarbert HFO Plant ceased operating in December 2023. In 2022 the Minister for the Environment, Climate and Communication approved a Temporary Emergency Diesel Fired Generation Plant (the TEG Plant), for a 150MW Open Cycle Gas Turbine (OCGT) plant on a south-western portion of the Tarbert Power Station site. Construction works for this project have commenced, and once complete in 2024 the project will be operational for approximately five years (until 2029). After this time, the project is expected to be decommissioned, dismantled and removed from SSE Tarbert in line with that project's requirements. In November 2023, SSE Generation Ireland Ltd. submitted an application to An Bord Pleanála for a 10-year planning permission to develop an OCGT Power Plant fuelled by Hydrotreated Vegetable Oil ('HVO') within the existing Tarbert Power Station. A decision on this application is due in June 2024 (Planning Ref, PA08.318540).

Moneypoint is Ireland's largest generation station with an installed capacity of 915 MW, located 3.5 km north-east of the Site. In 2023 in response to a security of electricity supply need ("*Energy Security in Ireland to 2030*" (November 2023)) (identified by EirGrid and the CRU), ESB and EirGrid signed an agreement to make Moneypoint available as an out-of-market generator of last resort from 2025 to 2029. In February 2024, ESB submitted an application to An Bord Pleanála for the transition and conversion of the existing coal fired power station's primary fuel to Heavy Fuel Oil (HFO), with limited run hours for a period of five years until the end of December 2029, when Moneypoint Generating Station will cease generation. A decision on this application is currently unknown (Planning Ref, PA03.319080).

The EirGrid Kilpaddoge-Knockanure project is an underground electricity cable that links the substations of Knockanure and Kilpaddoge, near Tarbert. The project connects renewable electricity generated in the south-west of Ireland and transports approximately 300 MW of energy generated by local wind farms (EIRGRID, 2020).

#### **17.4.2.2 Gas Network**

There is no existing natural gas transmission network within the footprint of the Site.

A GNI owned and operated gas transmission pipeline is located approximately 21 km east of the Site. The pipeline runs from its landfall on the south side of the estuary to the west and south of Foynes along its route to Craggs Above Ground Installation (AGI) (Gas Networks Ireland, 2021).

Planning permission exists for the development of a 26 km Natural Gas Pipeline (Planning Reference: PL08.GA0003), which will facilitate connection from the Site to the GNI transmission network at Leahy's, to the west of Foynes, Co. Limerick.

#### **17.4.2.3 Telecommunications**

An existing overhead telecom line (EIR phone line) runs along the L1010 road. There are no broadband connections within the footprint of the Site. The closest fibre broadband infrastructure is located in Ballylongford, 3.5 km from the Site.

#### 17.4.2.4 Water Supply

Currently there is a group water scheme, supplied from Ballylongford, that extends to a distance of about 150 m beyond the entrance to the Site.

Ballylongford, approximately 3.5 km west of the Site, is served by the Listowel Regional Water Supply with adequate water supply. The Listowel Regional Water Supply serves a population of 14,781 persons and the supply volume is 9,749m<sup>3</sup>/day (Irish Water<sup>1</sup>, 2021).

Tarbert, approximately 4.5 km east of the Site, is designated as a District Town of the Listowel Municipal District. Tarbert is served by the Listowel Regional Water Supply which has adequate capacity (Kerry Co. Co., 2020).

#### 17.4.2.5 Wastewater Services (Stormwater and Foul Water)

There are no existing stormwater or foul water drainage systems within the footprint of the Site, or along the L1010 road, adjacent to the Site.

The Tarbert Wastewater Treatment Plant (WWTP) (D0283-01) operated by Uisce Éireann, is located in proximity to Harold's Bridge to the south of Tarbert village. The WWTP has a capacity of 1,300 Population Equivalent (P.E.) (Kerry Co. Co., 2020).

The Ballylongford WWTP (D0459-01) has a capacity of 1,000 P.E, however, networks constraints do exist in Ballylongford (Kerry Co. Co., 2020).

A survey conducted by Irish Water in 2014 (latest data available) inspected the existing foul network for the Tarbert area. It concluded that the existing foul water is a partially combined system consisting of the following (Irish Water, 2014):

- 2,372 m of 100 mm and 150 mm diameter sewers.
- 2,261 m of 225 mm diameter sewers.
- 56 m of 300 mm diameter concrete sewers.
- 23 m of 450 mm diameter sewers.

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<sup>1</sup> Now Uisce Éireann

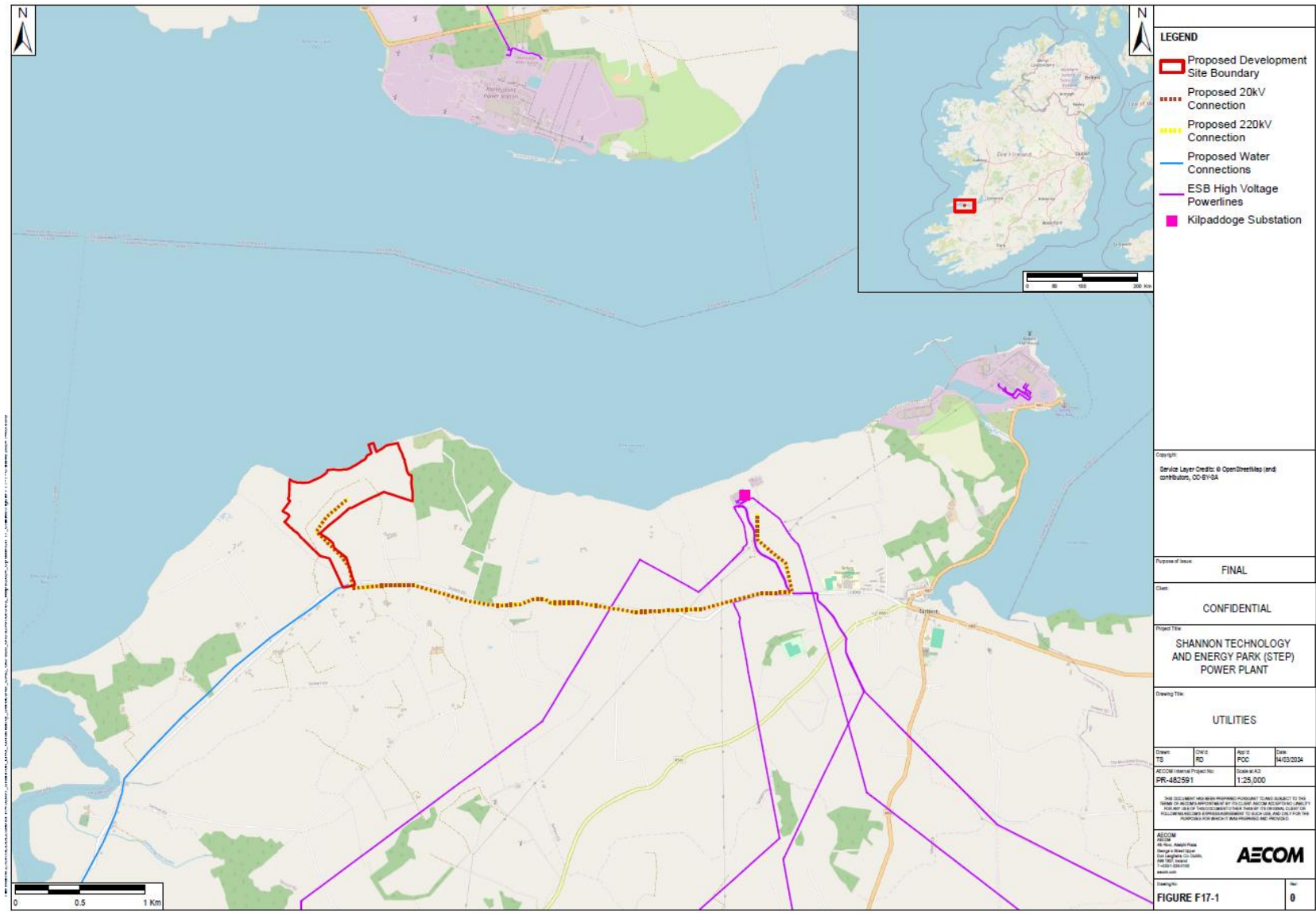


Figure 17.1: Map of the Utilities in proximity to the Site

## 17.5 Assessment of Impact and Effect

### 17.5.1 Do Nothing Scenario

If the 'Do Nothing' Scenario is taken forward, there would be no change in impacts on land use and built services.

### 17.5.2 Construction Phase

The construction programme is anticipated to take 32 months, subject to seasonal and other planning constraints. The final construction programme will be determined by the Engineering, Procurement and Construction (EPC) Contractor, refer to **Chapter 02** (Description of the Proposed Development).

Where utility pipe laying and connections to public utilities are required for the Proposed Development, tie-ins to public utilities during the construction phase will be specifically designed and installed following approved methods, and with the agreement of the relevant utility provider.

The utilities will come onsite from cables / pipes under the L1010 road and traverse along the side of the Site access road before connecting into the infrastructure onsite.

#### 17.5.2.1 Land Use

The Applicant has entered into an agreement with the owner of the Landbank (Shannon Commercial Properties (Designated Activity Company [DAC]) for the purchase of the entire Shannon Landbank, with a total area of 243 ha (603 acres). The Site of the Proposed Development is 41 ha.

Demolition of an existing abandoned farmhouse and a 'pillbox'<sup>2</sup> structure within the Site of the Proposed Development is required to facilitate the development. Refer to **Chapter 12** (Cultural Heritage) for details of the identified cultural heritage assets and for the location of all structures to be demolished.

While the effects of the demolition will be **Permanent**, the demolition works themselves will be **Temporary, Negative** and **Not Significant** as the farm buildings are currently unoccupied. Refer to **Chapter 12** (Cultural Heritage) for the assessment of effects of the Proposed Development on cultural heritage assets.

The Proposed Development will be located on agricultural grassland. The construction phase of the Proposed Development will have a **Negative, Significant** and **Short-Term** impact on land use, as the land use changes from agricultural use over the course of the construction phase to an industrial power use.

The construction phase of the Proposed Development will require some vegetation clearance for the Contractor working areas, access tracks and site compound, as well as the footprint of the new infrastructure. This will result in some habitat and flora loss and in an effect on the lost vegetation, refer to **Chapter 07B** (Terrestrial Ecology).

Construction of the Proposed Development will be visible in some areas as the land use changes from agricultural use to a construction site, with temporary fencing and construction plant and machinery, refer to **Chapter 10** (Landscape and Visual).

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<sup>2</sup> It is described as 'a detached single-bay single-storey hexagonal pill box, built approximately 1942, now derelict. Flat concrete roof. Concrete walls with rubble limestone camouflage covering. Square-headed chamfered openings. Square-headed door opening. Built within a field boundary. A typical WWII era pill box, of functional design. It remains in good condition due to its simple Design' (Laban, 2008).

### 17.5.2.2 Electricity Network

During the construction phase, electricity will be required by the Contractor, and this will be provided to the construction compound via a series of portable site diesel generators, until the 220 kV and medium voltage (10 / 20 kV) grid connections are installed. The 220 kV high voltage connection and the medium voltage (10 / 20 kV) will be subject to connection agreements with EirGrid and ESNB respectively. These grid connections will be subject to separate planning applications and do not form part of the Proposed Development.

The electricity power requirements during the construction phase will be provided to the construction compound using a temporary power supply via a low voltage rural connection or using diesel generators. As a result, the effect will be **Imperceptible** on the existing network, as there will be no requirement to impact or disrupt the existing electricity network during the construction phase.

The Proposed Development will have an installed capacity of up to 600 MW and will be designed in accordance with best available techniques (BAT) for large combustion plants, industrial cooling systems, energy efficiency and emissions from storage.

### 17.5.2.3 Gas Network

During the construction phase, underground gas pipework connections will be laid between the area for the proposed Power Plant elements and the area of the proposed Gas Above Ground Infrastructure (AGI). The AGI will accommodate the equipment to facilitate the connection to the already consented 26 km Natural Gas pipeline.

The proposed AGI will be located to the south-east of the proposed Power Plant. The gas pipeline network will transport natural gas from the AGI to the Power Plant. The gas pipe between the AGI and Power Plant will be installed in a below ground concrete trench, covered where required with suitable traffic-bearing cover. The facility will be designed to Gas Network Ireland (GNI) specifications. This gas connection will have short disruption to the national network during connection and construction process. However, the impact will be **Negative, Slight** and **Temporary** in duration.

However, during the construction phase there will be no requirement for natural gas at the construction compound for the construction works. As a result, there will be no change to the existing gas network supply, the effect will be **Imperceptible**.

### 17.5.2.4 Telecommunications

During the construction phase communications supplies to the AGI and Power Plant, including the Battery Energy Storage System (BESS) will be laid underground. Power and communications supplies to the Power Plant will be provided by cables running in a below ground concrete trench, covered where required with suitable traffic-bearing cover. A short-term connection outage may be required to facilitate this connection. The magnitude of impact will be **Negligible** and the significance of effect without mitigation will be **Slight** and **Temporary** in duration.

In the unlikely event that any unknown services are discovered during the construction phase, there is the potential to impact on local network supplies, causing a potential **Temporary, Slight** and **Negative** effect.

### 17.5.2.5 Water Supply

During the construction phase water supply will be required in the contractor compounds, wheel wash areas, welfare facilities, general construction works, hydrotesting of tanks and pipework (including gas pipeline pipework) and for dust suppression.

It is anticipated that water supply for the construction phase will be obtained from a water main along the L1010 road. The Applicant has submitted a pre-connection agreement application to Uisce Éireann for this supply. If this supply is not available, water will be delivered by road and stored in a temporary tank onsite. The maximum potable water demand for construction personnel will be 98 m<sup>3</sup>/day.

It is not anticipated the additional demands on the water supply network during the construction phase will be excessive given the temporary nature of the construction works.

The water supply requirements during the construction works will result in a **Negative, Short-Term** and **Moderate** effect on an existing water environment.

### 17.5.2.6 Wastewater Services (Stormwater and Foul Water)

#### Stormwater Network (Surface Water)

There are no existing stormwater drainage networks within the footprint of the Site or along the L1010 road.

During the construction phase, there is potential for surface water impacts to occur from sedimentation of surface water features from construction activities (e.g. earthworks, excavations, levelling etc.), and pollution of surface waters from accidental spills and leaks of fuels and chemicals. Refer to **Chapter 06 (Water)** for potential surface water impacts on receiving waterbodies.

During the construction phase stormwater (surface water) runoff will be diverted from the main construction area by a combination of suitable falls on subgrade surfaces, as well as temporary drainage ditches. All stormwater (surface water) runoff will then be passed through a series of settlement and filtration ponds in order to remove any suspended solids, before being discharged to the Shannon Estuary. This drainage system will be designed in accordance with EN 12056 and a detailed drainage plan for the construction phase will be developed during the detailed design phase by the Contractor.

The impact of a high sediment load entering the Shannon Estuary during construction could impact on both water quality, the hydromorphology and habitats refer to **Chapter 07A (Marine Ecology)**.

The importance of the Shannon Estuary is considered to be Extremely High. Runoff containing large amounts of suspended solids can adversely impact on surface water. The impact of runoff is considered to be a **Short-Term** effect, as it is only associated with certain phases of the 32-month construction programme, refer to **Chapter 06 (Water)**. Control of runoff and release of suspended sediment from construction activities will be managed under the Construction Environmental Management Plan (CEMP); therefore, uncontrolled runoff containing large amounts of suspended solids is considered unlikely and would result in an **Imperceptible** effect on these receptors, refer to **Chapter 06 (Water)**.

#### Foul Water

During the construction phase, the construction compound will include welfare facilities and showers for the construction staff. Foul water effluent arising from these facilities, will be collected in sealed storage tanks and portable self-contained toilet units, for removal by tanker to an authorised offsite



Wastewater Treatment Plant (WWTP). The storage tanks will be monitored and equipped with an alarm system to prevent overflow. As this control measure will be incorporated into the Site set-up and incorporated into the CEMP, additional specific mitigation measures are therefore not required to address foul water sewage during the construction phase and are not discussed further.

### 17.5.3 Operational Phase

#### 17.5.3.1 Land Use

As outlined in **Section 17.4.1**, the land is currently zoned for industry, are identified as a strategic development location and are currently owned for the purpose of Proposed Development.

However, during the operational phase the land use will be permanently changed from an agricultural land use to industrial / power infrastructure on a much large scale. As a result, the operational phase will have a **Negative, Significant, Permanent** and **Direct** impact on land use.

#### 17.5.3.2 Electricity Network

During the operational phase, it is envisaged that the Power Plant (including the BESS) will have an operational life of 25 years.

The electrical outputs from the Power Plant will be fed to the high voltage transformers where the voltage will be stepped up to the transmission voltage onto the 220 kV Substation. The power will be transferred via an underground cable linking the Power Plant to the 220 kV Substation.

The 220 kV Substation, which forms part of the Proposed Development, will accept the 220 kV output from each CCGT Block and BESS in the Power Plant and connect to the national electricity grid via the future proposed 220 kV grid connection, refer to **Section 17.4.3.2.1**.

A small amount (approximately 10 MW) of the electricity generated by the Proposed Development will be used in the operation of the Proposed Development itself. The balance of the electricity produced is intended for the market and will be sold into the integrated Single Electricity Market (iSEM).

It is anticipated that the new electrical infrastructure of the Power Plant will have a **Long-Term, Positive** and **Very Significant** effect on the existing electricity supply network during operations as the Proposed Development will deliver the urgently needed electricity generation requirements to meet capacity needs.

##### 17.5.3.2.1 High Voltage 220 kV Connection

A high voltage (HV) 220 kV grid connection to the national electrical transmission network is required to export power from the Power Plant and BESS, when operational. During periods of high wind (renewable) generation it is expected that the Power Plant units (*i.e.*, 3 No. CCGT) will be turned off by the system operator (EirGrid) to give priority to renewable power. In this scenario, the Power Plant will not be generating power. But the standby power plant needs 10 MW of power. This power will be imported via the proposed future 220 kV high voltage grid connection.

The 220 kV high voltage connection and the medium voltage (10 / 20 kV) will be subject to connection agreements with EirGrid and ESNB respectively. These grid connections will be subject to separate planning applications and do not form part of the Proposed Development.

The current proposal is that the connection point will be the ESBN / EirGrid Killpaddoge 220 kV substation which is located approximately 3 km east (as the crow flies) of the Site with connection provided via a 220 kV cable(s) under the L1010 road as shown in **Figure 2-22**.

It is anticipated that the 220 kV grid connection will require an onsite EirGrid 220 kV substation. This is currently proposed to be located onsite and approximately 500 m from the main Site entrance of the Proposed Development, refer to **Chapter 02**.

This will result in a **Short-Term, Negative, Moderate** effect on the existing electricity network as a result of the future medium voltage (10 / 20 kV) and 220 kV grid connections during times where the Power Plant is not operational.

#### 17.5.3.2.2 Medium Voltage Connection (10 / 20 kV)

If the 220 kV grid connection is not available, for example due to a cable malfunction, a medium voltage (10 / 20 kV) grid connection will be used as a backup power supply.

Therefore, a separate medium voltage (10 / 20 kV) connection to power the facility in the absence of the 220 kV high voltage grid connection will be installed. This medium voltage (10 / 20 kV) grid connection will be reserved as a backup power supply. However, the connection is subject to a connection agreement with ESBN and will be considered under a separate planning application. The onsite substation will be located within the Site redline boundary approximately 800 m from the proposed Site entrance.

#### 17.5.3.3 Gas Network

During the operational phase the Power Plant will operate off natural gas as the primary fuel (delivered to Site via the consented 26 km Natural Gas Pipeline which will facilitate connection from the Site to the GNI transmission network west of Foynes). The Power Plant will generate power which will be exported via the 220 kV connection to the national electricity grid.

As required by the Secondary Fuelling Obligation<sup>3</sup>, a supply of low sulphur gas oil (*i.e.*, distillate oil) for five days continuous operating will be stored on-site. A supply of low sulphur gas oil (*i.e.*, distillate oil) for five days continuous operating will be stored on-site, equating to approximately 11,500 cubic metres (about 9,800 tonnes). The distillate oil is required to maintain the running of the gas turbine in the event of a disruption of the gas supply.

The Proposed Development will use approximately 25.5 GWh/d<sup>4</sup> of natural gas when operating at full capacity.

During operations, the AGI will regulate gas pressure and temperature to a level suitable for use in the Power Plant. Natural gas will be forwarded from the Pressure Regulating Station (PRS) outlet in the AGI compound via a buried gas pipework. The detailed design of the AGI will be completed by GNI.

The new gas infrastructure will have a high sensitivity as this infrastructure will tie into the existing national network for a gas supply. The magnitude of impact will be **Very Significant** as there will be a major change in utilities required during operational phase of the Power Plant. As a result, the existing

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<sup>3</sup> Under the Commission for Energy Regulation's Decision Paper CER/09/001, Secondary Fuel Obligations on Licence Generation Capacity in the Republic of Ireland

<sup>4</sup> Gigawatt hour per day



gas network, the significance of effect without mitigation will be **Very Significant, Negative** and **Long-Term** in duration, as the Power Plant will operate off natural gas, from the gas grid.

#### 17.5.3.4 Telecommunications

The Proposed Development will require a connection to a broadband network, which will result in a slight increase in demand. It is anticipated that it will be serviced by a new fibre cable which will be supplied via a new duct under the widened L1010 road.

As a result, the significance of effect on the existing telecommunications network, without mitigation, will be **Slight, Negative** and **Long-Term** in duration.

#### 17.5.3.5 Water Supply

During the operational phase the Proposed Development will require water supply for the following:

- Domestic staff: 3.6 m<sup>3</sup>/day.
- Process water: ranging between 10 m<sup>3</sup>/hr and 33 m<sup>3</sup>/hr.

The raw water will be stored in two (2 No.) raw water storage tanks.

The Applicant has made a connection request to Uisce Éireann which will require connection to a mains water system. It is anticipated that this will be provided along the L1010 road from Ballylongford to the Site. The water connection does not form part of the scope of this EIAR, refer to **Chapter 02** (Description of Proposed Development).

The Proposed Development will adhere to all conditions of the connection offer from Uisce Éireann.

Fire water will be supplied from the municipal water supply system and will be stored onsite in two (2 No.) separate tanks, each with a dedicated capacity representing a minimum of two hours of fire water requirement during firefighting. In addition to the firewater storage tanks, additional firewater will be stored in the firewater retention pond as described in **Chapter 02**, Section 2.3.13.3.

The additional demands on the existing water supply network during operations, will likely result in a **Negative, Moderate, Long-Term** effect on existing supply network.

The proposed potable water layout is presented on the following Drawings, submitted with this application:

- 198291-1STU-S3301B: Potable Water Layout - Site Plan - Area 1.
- 198291-1STU-S3302B: Potable Water Layout - Site Plan - Area 2.
- 198291-1STU-S3303B: Potable Water Layout - Site Plan - Area 3.
- 198291-1STU-S3304B: Potable Water Layout - Site Plan - Area 4.
- 198291-1STU-S3305B: Potable Water Layout - Site Plan - Area 5.
- 198291-1STU-S3306B: Potable Water Layout - Site Plan - Area 6.

#### 17.5.3.6 Wastewater Services (Stormwater and Foul Water)

##### Stormwater Network (Surface Water)

During the operational phase, stormwater (surface water) will be generated from all surfaces within the Site which are exposed to rainwater, including areas where water is used to wash down. This includes all hardstanding surfaces, roofs, and other impermeable surfaces.

The drainage systems are designed in accordance with the Sustainable Urban Drainage System (SUDs) guidance and EN 752 and EN 12056.

Stormwater (surface water) from vegetated and impermeable areas and groundwater from the groundwater drainage network of the Site will be collected and discharged, where possible, to the existing stream / drainage ditches, or discharge directly to the Shannon Estuary via the drainage outfall pipe, which will extend across the foreshore to the below the low water mark, refer to **Chapter 02** and **Chapter 06** (Water).

The drainage features along the access road all ultimately drain to a single surface watercourse, the Ralappane Stream, which discharges to the Shannon Estuary, refer to **Chapter 06** (Water).

Impacts on receiving waterbodies from anthropogenic pollutants in stormwater (surface water) surface runoff (including accidental fuel spillages from tanks and pipelines) are not anticipated, based on the embedded design measures, including bunding of fuel tanks and inclusion of interceptors within the drainage system. As a result, the significance of effect will be **Neutral** and **Not Significant**, refer to **Chapter 06** (Water). A site-specific Flood Risk Assessment (FRA) is presented in **Appendix A6.3**, Volume 4.

### Foul Water

During the operational phase, all foul water will be pumped or fall by gravity to a proposed wastewater treatment plant (WWTP). The treated effluent from the WWTP will be discharged to the Shannon Estuary via the same discharge point as the surface water, in accordance with the Industrial Emissions (IE) licence for the Site. Estimated operational waste quantities are provided in **Table 2.4** in **Chapter 02** (Description of the Proposed Development).

Impacts are not anticipated based on the embedded design measures, and the lack of connection with other utilities. The significance of effect will be **Neutral** and **Not Significant**.

The proposed foul water layout is presented on the following Drawings, submitted with this application:

- 198291-1STU-S3301A: Sanitary Layout - Site Plan - Area 1.
- 198291-1STU-S3302A: Sanitary Layout - Site Plan - Area 2.
- 198291-1STU-S3303A: Sanitary Layout - Site Plan - Area 3.
- 198291-1STU-S3304A: Sanitary Layout - Site Plan - Area 4.
- 198291-1STU-S3305A: Sanitary Layout - Site Plan - Area 5.
- 198291-1STU-S3306A: Sanitary Layout - Site Plan - Area 6.

### Process Effluent

There will be several process effluent streams generated in the Power Plant as outlined in **Chapter 02** (Description of the Proposed Development). Some of the effluent streams will be collected and transported offsite to a licensed facility and the remaining effluent streams will be pumped or fall by gravity to the effluent sump. The process effluent will be directed to the effluent sump before discharge into the Shannon Estuary in accordance with the Industrial Emissions (IE) licence for the Site.

Therefore, there will be **No Impact** from process effluent arising from the Proposed Development on the existing drainage networks in the study area. Refer to **Chapter 06** (Water) for assessment of potential impacts from process effluent on receiving watercourses.

## 17.5.4 Decommissioning Phase

Effects arising from the process of decommissioning of the Proposed Development are considered to be of a similar nature and duration to those arising from the construction phase and are therefore have not been considered separately.

As outlined in **Chapter 02** (Description of the Proposed Development), in the event of decommissioning, measures will be undertaken by the Applicant to ensure that there will be no significant, negative environmental effects from the closed Proposed Development. Examples of the measures that will be implemented are outlined in **Chapter 02** (Description of the Proposed Development).

Where decommissioning takes place, all above-ground equipment associated with the Proposed Development will be disassembled and removed from the Site. However, prior to the removal of plant, all residues and operating chemicals will be cleaned out from the plant and disposed of at a suitably licenced facility.

## 17.6 Cumulative Impacts and Effects

Cumulative effects are defined as the combination of many minor impacts creating one, larger, more significant effect (EPA, 2022). Cumulative effects consider existing stresses on the natural environment as well as developments that are underway and in planning.

This cumulative assessment has been undertaken with reference to **Appendix A1.2**, Volume 4, which lists planning applications within 5 km and outside 5 km of the Proposed Development.

### 17.6.1 Construction Phase

As outlined in **Section 17.5.2**, there will be no additional demands on the electricity, gas and telecommunications network during the construction phase of the Proposed Development.

The Contractor may require a temporary connection to the existing water supply network; however, anticipated demands from the Proposed Development on existing water supply networks during the construction phase will not be excessive, as discussed above, and will not likely result in significant effects.

#### 17.6.1.1 SLNG Strategic Gas Reserve Facility

The location of the Proposed Development is the subject of a SID pre-application for a Proposed Shannon Technology and Energy Park (STEP) Strategic Gas Reserve Facility (APB-319245-24) comprising of a floating storage and regasification unit (FSRU), jetty and access trestle, onshore receiving facilities, and all ancillary works. A pre-application was submitted to An Bord Pleanála (ABP) on 8<sup>th</sup> March 2024, and a request for a pre-application consultation meeting is pending from the Board.

Should this development be constructed at the same time as the Proposed Development, potential disruptions to existing utilities will be **Negative**, **Moderate** and **Short-Term** in duration.

#### 17.6.1.2 SLNG Gas Pipeline

Planning permission exists for the development of a 26 km Natural Gas pipeline which will facilitate connection from the Site to the GNI transmission network at Leahy's, located to the west of Foynes, Co. Limerick.

Should this development be constructed at the same time as the Proposed Development, there is a potential for cumulative effects associated with further temporary disruptions to existing utilities and increased demands on existing utilities. As noted above, potential disruptions to existing utilities will be **Negative, Moderate** and **Short-Term** in duration.

#### 17.6.1.3 High Voltage 220 kV and Medium Voltage (10 / 20 kV) Power Transmission Networks

Shannon LNG executed a 600 MW 220 kV grid connection agreement with EirGrid for the Power Plant on 14<sup>th</sup> April 2023. The precise connection details are being developed at this time and cannot be confirmed at the time of this planning submission for the Proposed Development. The likely proposal is that the connection point will be the ESBN / EirGrid Kilpaddoge 220 kV substation which is located approximately 5 km east of the Site with connection provided via a 220 kV cable(s) under the L1010 road.

If the 220 kV grid connection is not available medium voltage (10 / 20 kV) grid connection will be used as a backup power supply. However, the connection is subject to a connection agreement with ESBN and will be considered under a separate planning application. The medium voltage (10 / 20 kV) and 220 kV power connections will be constructed in parallel with the Proposed Development but will be subject to separate planning design and planning applications. Further details on the proposer's 220 kV and medium voltage power transmission networks can be found in Section 2.3.12.1 of **Chapter 02** (Description of the Proposed Development).

As this development will be constructed at the same time as the Proposed Development, potential disruptions to existing utilities will be **Negative, Moderate** and **Short-Term** in duration.

#### 17.6.1.4 Data Centre Campus

As part of the Masterplan for the Site, a Data Centre Campus is to be constructed to the west of the Proposed Development. However, the Proposed Development and the Data Centre Campus will not be constructed simultaneously and there will likely be no cumulative impacts on existing utilities network during the construction phase associated with these developments. This will be subject to its own EIAR and planning application. The impact will be **Neutral**.

#### 17.6.1.5 Open Cycle Gas Turbine (OCGT) Power Plant, SSE Tarbert Power Station

SSE Generation Ireland Ltd. have submitted an application to An Bord Pleanála for a 10-year planning permission to develop an OCGT Power Plant fuelled by HVO along with associated buildings, plant, site works, services and ancillary development on land within the existing SSE Tarbert Power Station, Co. Kerry. A decision on this application is due in June 2024, Planning Ref, PA08.318540.

There is potential for overlapping construction phases of this project with the Proposed Development creating potential cumulative Material Assets impacts, with further temporary disruptions to existing utilities and increased demands on existing utilities.

As noted above, potential disruptions to existing utilities for the Proposed Development will be **Slight / Moderate** during the construction phase. However, best practice construction mitigation measures will be implemented for both the OCGT Power Plant and the Proposed Development (refer to **Section 17.7**), therefore it is not unreasonable to assume that the cumulative impact will be **Not Significant**.

### 17.6.1.6 Moneypoint Transition and Conversion of the Existing 900 MW Power Station

ESB submitted an application to An Bord Pleanála for the transition and conversion of the existing coal fired power station's primary fuel to HFO, with limited run hours for a period of five years until the end of December 2029, when Moneypoint Generating Station will cease generation.

There is potential for overlapping construction phases of this project with the Proposed Development creating potential cumulative Material Assets impacts, with further temporary disruptions to existing utilities and increased demands on existing utilities.

As noted above, potential disruptions to existing utilities for the Proposed Development will be **Slight / Moderate** during the construction phase. However, best practice construction mitigation measures will be implemented for both the conversion of Moneypoint Power Station and the Proposed Development (refer to **Section 17.7**), therefore it is not unreasonable to assume that the cumulative impact will be **Not Significant**.

### 17.6.1.7 Summary

During the construction phase of the above projects, there may be a **Negative** cumulative effect on the existing water supply, gas networks and telecommunications due to additional demands on these networks to facilitate their construction. However, the supply requirements are unknown at this stage. In addition to this, any required temporary connections by the Contractor will be conducted in consultation with the relevant service provider. Standard best practice control measures will be implemented as required on all sites. Therefore, cumulative effects on the existing utilities network during the construction phase will be **Negative, Short-Term** but **Not Significant**.

## 17.6.2 Operational Phase

As outlined in **Section 17.5.3**, the new electrical infrastructure of the Power Plant will have a **Positive** and **Moderate** to **Very Significant** effect on the existing supply networks during operations.

### 17.6.2.1 SLNG Strategic Gas Reserve Facility

As noted above, the location of the Proposed Development is the subject of a SID pre-application for a Strategic Gas Reserve Facility (APB-319245-24) comprising of a floating storage and regasification unit (FSRU), jetty and access trestle, onshore receiving facilities, and all ancillary works.

This development will be operated at the same time as the Proposed Development and will be subject to its own EIAR and planning application. The impact will be **Positive, Long-Term** and **Very Significant**.

### 17.6.2.2 SLNG Gas Pipeline

The SLNG gas pipeline proposes to construct a natural gas pipeline between the Proposed Development and the existing GNI national gas transmission network.

The cumulative effects from the gas pipeline will likely result in a **Positive, Long-Term** and **Very Significant** cumulative effect on the existing electricity supply network, as the gas pipeline will facilitate a connection from the Site to the GNI transmission and ensure that the Applicant can deliver its electricity generation capacity contract by no later than October 2026. Refer to see **Chapter 02** (Description of the Proposed Development) for further details.

### 17.6.2.3 High Voltage 220 kV and Medium Voltage (10 / 20 kV) Power Transmission Networks

The future developments associated with the Proposed Development could also result in cumulative impacts on the existing electricity network during their operation.

The relevant service providers (Uisce Éireann, ESBN, EirGrid, GNI and broadband suppliers along with Kerry Co. Co.) have been consulted in relation to provision of services for the Site of the Proposed Development and have not indicated any difficulty with the resources required.

The Proposed Development will not be operational all year round and will see frequent periods where it is instructed to shutdown down by the system operator, EirGrid. This is because under current grid rules, renewable generation is given priority to generate ahead of gas fired generation *i.e.* the Power Plant.

The HV 220 kV electrical connection to the national electrical transmission system will be required to export power from the Power Plant. The precise connection details are being developed at this time and cannot be confirmed yet. The current proposal is that the connection point will be the ESBN / EirGrid Killpaddoge 220 kV substation which is located approximately 5 km east of the Site with connection provided via a 220 kV cable(s) under the L1010 road. The onsite ESBN / EirGrid 220 kV substation will also connect to the Proposed Development 220 kV GIS substation. Refer to see **Chapter 02** (Description of the Proposed Development) for further details.

The cumulative effects from this development, in combination with the Proposed Development, will likely result in a **Positive, Long-Term** and **Very Significant** cumulative effect on the existing electricity supply network.

### 17.6.2.4 Data Centre Campus

The Data Centre Campus will result in additional demands on the existing electricity grid. However, this will be subject to BAT, as well as its own licence and planning application; therefore, the power demands are unknown at this stage.

### 17.6.2.5 OCGT Power Plant, SSE Tarbert Power Station

The OCGT Power Plant will support the security of electrical power supply and the continued expansion of Ireland's renewable generation capacity. It will provide essential support to the electricity supply system at times of peak demand and at times when other electricity generation sources are not sufficient to meet demand.

The operational phase of the Proposed Development and the OCGT Power Plant will be operated in line with an IE licence (Ref: P0607-02) and the plant vendors Operation and Maintenance (O&M) manuals. The operators at both sites will implement and maintain an Environment Management System (EMS) which will be certified to International Standards Organisation (ISO) 14001.

The cumulative effects from this development, in combination with the Proposed Development, will likely result in a **Positive, Long-Term** and **Very Significant** cumulative effect on the existing utilities network.

### 17.6.2.6 Temporary Emergency Generating (TEG) Plant, SSE Tarbert Power Station

An application was lodged to the Minister for the Environment, Climate and Communications on 17 February 2023 from SSE for a development at Tarbert Power Station, Co. Kerry, under Section 4 of the Development (Emergency Electricity Generation) Act 2022 for an approval under section 7 of the Act (Planning Ref. EE08.315838).

The development consists of the installation and operation of a temporary emergency generating (TEG) plant comprised of three 50 MW gas turbine generators and associated ancillary electrical and mechanical equipment. It is envisaged that the development will be temporarily operational at the site for approximately five years.

The operational phase of the Proposed Development and the TEG Plant will be operated in line with an IE licence.

The cumulative effects from this development, in combination with the Proposed Development, will likely result in a **Positive, Long-Term** and **Moderate** cumulative effect on the existing utilities network.

#### 17.6.2.7 Moneypoint Transition and Conversion of the Existing 900 MW Power Station

The transition and conversion of Moneypoint Power Station to HFO will ensure that the power station remains viable as an energy generation node until the end of 2029, whereafter ESB intends on transforming the site and redeveloping it as a hub for the offshore renewable sector as part of the ESB's 'Towards Zero' Strategy. The project also aims to deliver the phasing out of fossil fuels under the Programme for Government (2020).

The Moneypoint Generating Station site operates, and will continue to operate, under the existing IE licence (P0605-04), regulated by the EPA. The cumulative effects from this development, in combination with the Proposed Development, will likely result in a **Positive, Long-Term** and **Very Significant** cumulative effect on the existing utilities network.

#### 17.6.2.8 Summary

In summary it is anticipated that the effects from the future developments on existing water supplies, telecommunications and gas networks, in combination with effects from the Proposed Development, will likely result in a **Positive, Long-Term** and **Very Significant** cumulative effect on the existing electricity supply network due to the amount of electricity generated that could be generated and sold onto the national grid network (*i.e.* up to 600 MW).

## 17.7 Mitigation and Monitoring Measures

### 17.7.1 Land Use

No mitigation or monitoring measures have been proposed, as the land use will permanently change over the course of the construction phase from agricultural use to an industrial power use.

### 17.7.2 Utilities

#### Construction Phase

Although it has been determined that the effects identified during the assessment on the existing utilities network in the study area will likely be Not Significant during the construction phase.

The following best practice measures will be implemented by the Contractor during the construction phase:

- A CEMP has been prepared and is presented within **Appendix A2.3**, Volume 4. This will be finalised by the E&C Contractor prior to the start of construction.
- Control of runoff from construction activities will be managed under the CEMP.



- As with any excavations there is a potential to disrupt local underground services. A confirmatory survey of all existing services will be carried out prior to construction and identify the precise locations of any services.
- The Contractor will be obliged to put measures in place during the construction phase to ensure that there are no interruptions to existing services and all services and utilities are maintained unless this has been agreed in advance with the relevant service provider and local authority. When service suspensions are required during the construction phase, reasonable prior notice will be given to the residents in the area. The disruption to services or outages will be carefully planned so the duration is minimised. The timing of local domestic connections will be addressed between the Contractor and the local community at the detailed design stage.
- All potential temporary connections will be agreed in advance with the relevant service provider.
- All utilities work shall be carried out in accordance with the relevant requirements of the respective service providers / authorities (*i.e.*, ESB, GNI, Eir, Virgin Media and any others of relevance). These works will be carried out in a manner that is safe, and which avoids or minimises interruptions of service which might affect local residents and businesses and adjacent development.
- Works during the construction phase, including service diversions and realignment will be carried out in accordance with relevant guidance documents, including GNI's publication '*Safety advice for working in the vicinity of natural gas pipelines*'; the ESB's '*Code of Practice for Avoiding Danger from Overhead Electricity Lines*', and the Health and Safety Authorities (HSA) '*Code of Practice for Avoiding Danger from Underground Services*'.
- All new infrastructure will be installed in accordance with the applicable standards, guidelines and codes of practice.
- The Proposed Development will incorporate water efficiency measures such as collection of grey water (for wheel washing activities) to minimise water consumption as far as possible.
- Periodic water quality monitoring at point of supply.
- All water supply will be maintained and fitted with stop taps.
- Water meters will be installed to monitor all water consumption for the duration of the construction phase.
- All offices and drying rooms energy efficiency measures will include: installation of sprung door closers in external doors, awareness notices to save energy, timers on heaters and boilers, sensors for lighting where possible and supervision to switch off other lights, computers, etc at the end of the day.

### **Operational Phase**

Prior to the operational phase of the Proposed Development, utilities infrastructure connections will be tested regularly by a suitably qualified person using an appropriate methodology, approved by the relevant service provider, and under the supervision of the local authority. The following best practice measures will be implemented during the operational phase:



- The water supply will be tested to the satisfaction of the local authority and Uisce Éireann prior to the connection to the public potable water.
- Potable water during the operational phase will be regulated and monitored under the IE licence.
- Routine maintenance will be carried out in accordance with the maintenance procedures provided by the Contractor and manufacturer.
- The Proposed Development (Power Plant) will be required to undertake an annual inspection, as per the manufacturer's requirements. During this time the Proposed Development will be shut down to allow the inspection to be completed (by the manufacturer's personnel).
- Emissions during the operational phase will be regulated and monitored under the IE licence.

There will be no requirement for additional mitigation measures during the operational phase.

### 17.7.3 Decommissioning Phase

Prior to any decommissioning, the IE licence will require a Decommissioning Plan (including a Decommissioning Environmental Management Plan) be produced and agreed with the EPA as a routine part of the Site closure and licence surrender process.

A Closure, Remediation, Aftercare Management Plan (CRAMP) will be prepared and agreed with the EPA.

The CRAMP will consider the potential environmental risks at the Site and provide guidance and appropriate mitigation procedures as necessary, to minimise risk.

## 17.8 Residual Impacts and Effects

### Construction Phase

With the implementation of best practice measures outlined in **Section 17.7**, the Proposed Development could still require a temporary suspension of services to facilitate the connection works to the utilities network during the construction phase. However, the residual effect on the existing utilities network will likely be reduced to **Slight** or **Imperceptible** during the construction phase as consultation with service providers will ensure the disruption to services or outages will be carefully planned so the duration is minimised.

The residual effects from the additional demands on existing water supply will be **Slight**.

### Operational Phase

Mitigation measures for utilities during the operational phase of the Proposed Development are outlined in **Section 17.7**.

During the operational phase no mitigation measures have been proposed for land use, therefore the residual effect from the land use change will remain **Significant**.

The residual effect on the existing electricity supply network, water supply network and telecommunications will be **Slight** as a result of the additional demand on the networks during operations.

During operations, the Proposed Development will operate off natural gas as the primary fuel and will use approximately 25.5 GWh/d<sup>5</sup> of natural gas when operating at full capacity. The residual effect on the existing gas supply network will remain **Very Significant**.

During the operational phase, stormwater (surface water), foul water and process water effluent will be generated. Discharges will be in accordance with the Industrial Emissions (IE) licence for the Site. The residual effect will be **Not Significant**.

The residual effect on the existing electricity transmission network will be **Long-Term, Positive**, and **Very Significant**, as the Proposed Development will export up to 600 MW of power to the electricity transmission system.

## 17.9 Summary

**Table 17.1** provides a summary of the likely significant effects on Material Assets as a result of the Proposed Development.

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5 Gigawatt hour per day

**Table 17.1: Summary of Impacts and Effects**

Phase	Aspect / Impact Assessed	Quality / Duration	Significance (Prior to Mitigation)	Mitigation and Monitoring Measures	Residual Significance	
Construction	Change of land use	Negative, Short-Term	Significant	N/A	Significant	
	Diversion / connection works on existing utility infrastructure					
	Electricity network	Neutral	Imperceptible	<ul style="list-style-type: none"> <li>A CEMP has been prepared and is presented within <b>Appendix A2.3</b>, Volume 4. This will be finalised by the Contractor prior to the start of construction.</li> <li>The Contractor will be obliged to put measures in place during the construction phase to ensure that there are no interruptions to existing services and all services and utilities are maintained unless this has been agreed in advance with the relevant service provider and local authority. When service suspensions are required during the construction phase, reasonable prior notice will be given to the residents in the area. The disruption to services or outages will be carefully planned so the duration is minimised. The timing of local domestic connections will be addressed between the Contractor and the local community at the detailed design stage.</li> <li>All potential temporary connections will be agreed in advance with the relevant service provider.</li> <li>Works during the construction phase, including service diversions and realignment will be carried out in accordance with relevant guidance documents, including GNI's publication '<i>Safety advice for working in the vicinity of natural gas pipelines</i>'; the ESB's '<i>Code of Practice for Avoiding Danger from Overhead Electricity Lines</i>', and the Health and Safety Authorities (HSA) '<i>Code of Practice for Avoiding Danger from Underground Services</i>'.</li> <li>All new infrastructure will be installed in accordance with the applicable standards, guidelines and codes of practice.</li> <li>The Proposed Development will incorporate water efficiency measures such as collection of grey water to minimise water consumption as far as possible. Refer to <b>Chapter 02</b> (Description of the Proposed Development).</li> <li>All offices and drying rooms energy efficiency measures will include: installation of sprung door closers in external doors, awareness notices to save energy, timers on heaters and boilers, sensors for lighting where possible and supervision to switch off other lights, computers, etc at the end of the day.</li> </ul>	Imperceptible	
	Gas network	Negative, Temporary	Slight		Imperceptible	
	Telecommunications	Negative, Temporary	Slight		Imperceptible	
	Water supply infrastructure	Negative, Short-Term	Moderate		Slight	
	Wastewater (stormwater)	Negative, Short-Term	Imperceptible		Imperceptible	
	Wastewater (foul water)	Neutral	Imperceptible		Imperceptible	
	Demand on existing supply					
	Electricity / gas supply	Neutral	Imperceptible		<ul style="list-style-type: none"> <li>Periodic water quality monitoring at point of supply.</li> </ul>	Imperceptible

Phase	Aspect / Impact Assessed	Quality / Duration	Significance (Prior to Mitigation)	Mitigation and Monitoring Measures	Residual Significance	
Operational	Water supply	Negative, Short-Term	Moderate	<ul style="list-style-type: none"> <li>Contractor will incorporate water efficiency measures such as collection of grey water (for wheel washing activities) to minimise water consumption as far as possible.</li> <li>All water supply will be maintained and fitted with stop taps and water meters will be installed to monitor all water consumption for the duration of the construction phase.</li> </ul>	Slight	
	Land use	Negative, Permanent	Significant	No mitigation or monitoring measures have been proposed.	Significant	
	Demand on existing supply networks					
	Electricity supply	Negative, Short-Term	Moderate	<ul style="list-style-type: none"> <li>Prior to the operational phase of the Proposed Development, utilities infrastructure connections will be tested regularly by a suitably qualified person using an appropriate methodology, approved by the relevant service provider, and under the supervision of the local authority.</li> </ul>	Slight	
	Gas supply	Negative, Long-Term	Very Significant	<ul style="list-style-type: none"> <li>Routine maintenance will be carried out in accordance with the maintenance procedures provided by the Contractor and manufacturer.</li> <li>The Proposed Development (Power Plant) will be required to undertake an annual inspection, as per the manufacturer's requirements. During this time the Proposed Development will be shut down to allow the inspection to be completed (by the manufacturer's personnel).</li> </ul>	Very Significant	
	Telecommunications	Negative, Long-Term	Slight		Slight	
	Water supply	Negative, Long-Term	Moderate	<ul style="list-style-type: none"> <li>The water supply will be tested to the satisfaction of the local authority and Uisce Éireann prior to the connection to the public potable water.</li> <li>Potable water during the operational phase will be regulated and monitored under the IE licence.</li> </ul>	Slight	
	Wastewater (stormwater)	Neutral	Not Significant		Not Significant	
	Wastewater (foul water)	Neutral	Not Significant	<ul style="list-style-type: none"> <li>Emissions during the operational phase will be regulated and monitored under the IE licence.</li> </ul>	Not Significant	
	Wastewater (process water)	Neutral	No Impact		No Impact	
	Export to transmission network					
	Electricity transmission network	Positive, Long-Term	Very Significant	<ul style="list-style-type: none"> <li>Routine maintenance will be carried out in accordance with the maintenance procedures provided by the Contractor and manufacturer.</li> </ul>	Very Significant	

Phase	Aspect / Impact Assessed	Quality / Duration	Significance (Prior to Mitigation)	Mitigation and Monitoring Measures	Residual Significance
<b>Decommissioning</b>		Negative, Temporary	Slight	<ul style="list-style-type: none"> <li>The Proposed Development (Power Plant) will be required to undertake an annual inspection, as per the manufacturer's requirements. During this time the Proposed Development will be shut down to allow the inspection to be completed (by the manufacturer's personnel).</li> <li>A Closure, Remediation, Aftercare Management Plan (CRAMP) will be prepared and agreed with the EPA.</li> <li>The CRAMP will consider the potential environmental risks at the Site and provide guidance and appropriate mitigation procedures as necessary, to minimise risk.</li> </ul>	Not Significant

## 17.10 References

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