SSE Tarbert Next Generation Power Station

Environmental Impact Assessment Report (EIAR)
Volume I
Chapter 16 Material Assets

SSE Generation Ireland Limited

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Delivering a better world

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16. Material Assets

16.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) identifies the significant impacts of the Proposed Development on material assets (built services) during the construction and operational and decommissioning phases.

Material assets are resources that are valued and intrinsic to the Site and the surrounding area. Material assets can be described as “built services” (i.e., utility networks such as electricity, telecommunications, gas, water supply infrastructure and sewerage), “waste management” and “infrastructure” (roads and traffic)[1].

The 2022 EPA Guidelines state that:

> *In Directive 2011/92/EU this factor included architectural and archaeological heritage. Directive 2014/52/EU includes those heritage aspects as components of cultural heritage. 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 will consider the potential impact to built services as a result of the Proposed Development. The potential impact on the traffic and transport and waste will be assessed in Chapter 14 (Traffic and Transport) and Chapter 18 (Waste Management) respectively and as such are not considered in this chapter.

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. The potential impacts associated with the Proposed Development, if any, are assessed with regard to the following proposed material assets:

- land use.
- gas and electricity supply.
- wastewater services (foul and surface water).
- water supply; and
- telecommunications.

Full details on the background and Site history are provided in Chapter 4 (Existing Site and Conditions), and details of the Proposed Development are provided in Chapter 5 (Description of the Proposed Development) and the Planning Statement submitted with this planning application.

[1] https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf

16.2 Legislation, Policy and Guidance

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

- Kerry County Council (2022). *Kerry County Development Plan (CDP) 2022-2028 (Kerry CDP 2022-2028).*
- 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').
- EPA (2022). *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (*'EPA 2022 Guidelines'*)*.
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018) ('EIA Regulations').

16.3 Methodology

There is no specific set of Environmental Impact Assessment (EIA) guidelines for the assessment of material assets. For this reason, the methodology used to assess the impact on built services is in accordance with best practice guidelines including:

- EPA (2022). *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports.*
- IEMA (2020). *IEMA Guide to Materials and Waste in Environmental Impact Assessment.*

A desktop assessment of information provided by the Applicant and publicly available information was undertaken to determine the baseline existing land use and utility arrangements within the study area which could be impacted as a result of the Proposed Development.

16.3.1 Selection of Study Area

The study area includes the Site, and the site surrounding area in relation to land use and utilities network that could be impacted by the Proposed Development. Selection of the surrounding area included in the study was based on professional judgment of the chapter contributor.

As the Site lies within the administrative area of Kerry County Council (KCC.), it is therefore subject to the land use policies and objectives of the Kerry CDP 2022-2028.

16.3.2 Quality of Effects

Material Assets were assessed for sensitivity, magnitude, and significance to provide an appropriate and adequate assessment of how they could be impacted by the construction, operational and decommissioning phases of the Proposed Development. The characteristic of an impact relates to the quality, sensitivity and duration of the impact and are defined in accordance with the EPA Guidelines[2]. Table 16.1 defines the quality of effects on the environment.

[2] EPA (2022). *Guidelines on the Information to be contained in Environmental Impacts Assessment Reports.*

Table 16.1: Quality of Effects

Quality of Effect	Description
Positive Effect	• A change which improves the quality of the environment (for example, by increasing species diversity or improving the reproductive capacity of an ecosystem; or removing nuisances; or improving amenities).
Neutral Effects	• No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Negative / Adverse Effects	• A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing a nuisance.

16.3.3 Determination of Sensitive Receptors

For the purpose of the assessment of "built services" in this chapter, as described in section 16.1, the sensitive receptors are regarded as the built services and infrastructure in the study area. Terminology used to describe the sensitivity of the receptor has been adopted from the *EPA Guidelines*[3].

16.3.3.1 Land Use

The criteria for land use sensitivity are outlined in Table 16.2.

Table 16.2: Sensitivity Criteria for Land Use

Sensitivity	Description
High	• Private residential buildings, or land allocated for development of housing. • Buildings used for employment use, and land allocated for development of employment uses. • Regularly used community buildings which have no alternatives available nearby. • Designated public open spaces, or open spaces which attract users nationally e.g., national parks
Medium	• Land associated with private residential buildings e.g., gardens. • Community buildings which are regularly used or where there are only limited alternatives available in the local area. • Open spaces which span over a regional area and attract visitors from a regional catchment e.g., country parks, forests. • Public rights of way and other routes close to communities which are used for recreational or utility purposes, but for which alternative routes can be taken.
Low	• Community buildings which are infrequently used or where there are many alternatives available in the local area. • Open spaces which are used for informal recreation (e.g., dog walking), and where there are alternative open spaces available. • Locally used community land e.g., local parks and playing fields. • Property consisting of public road / private road and small plots of land.
Negligible	• Derelict or unoccupied buildings.

16.3.3.2 Utilities Infrastructure

The criteria for the existing utilities infrastructure sensitivity are outlined in Table 16.3.

[3] EPA (2022).

Table 16.3: Sensitivity Criteria for Utilities

Sensitivity	Description
Very High	• Very high importance and rarity, international scale and very limited potential for substitution.
High	• High importance and rarity, national scale and limited potential for substitution.
Medium	• High or medium importance and rarity, regional scale, limited potential for substitution.
Low	• Low or medium importance and rarity, local scale.
Negligible	• Very low importance and rarity, local scale.

16.3.4 Magnitude of an Impact and Significance

Descriptions and criteria for defining the magnitude of an impact outlined in Table 16.4.

Table 16.4: Magnitude of Impact and Description

Magnitude	Typical Criteria Descriptors
Major	• Loss of resource and / or quality and integrity of resource, severe damage to key characteristics, features or elements (Adverse). • Large scale or major improvement of resource quality; extensive restoration or enhancement major improvement of attribute quality (Positive).
Moderate	• Loss of resource, but not adversely affecting the integrity; partial loss of / damage to key characteristics, features or elements (Adverse). • Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Positive).
Minor	• Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse). • Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some positive impact on attribute or a reduced risk of negative impact occurring (Positive).
Negligible	• Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse). • Very minor benefit to or positive addition of one or more characteristics, features or elements (Positive).
No Change	• No loss or alteration of characteristics, features or elements, no observable impact in either direction.

Table 16.5 outlines the significance categories in which an impact arising from the Proposed Development could be categorised.

Table 16.5: Significance of Effects

Significance	Typical Descriptors of Effect
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision- making process. These effects are generally, but not exclusively, associated with sites or features of international, national, or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process and are not important in enhancing the subsequent design of the project.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Table 16.6 shows how the interaction between sensitivity and magnitude results in the significance of an environmental effect.

Table 16.6: Matrix for Determining Significance

		Magnitude of Impact				
		No Change	Negligible	Minor	Moderate	Major
Sensitivity	**Very High**	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral Slight	Neutral or Slight	Slight

The methodology used for evaluating impact levels and the terminology for describing the quality, significance, extent, probability, and duration of effects is as per the EPA Guidelines[4]. In summary, it involves combining a sensitivity of a receptor with a description of an impact on that receptor (its quality, type, frequency, duration, probability, and magnitude) to determine a significance of an effect.

16.4 Baseline Environment

This section provides a description of the relevant aspects of the baseline environment in relation to material assets.

[4] EPA (2022). *Guidelines on the Information to be contained in Environmental Impacts Assessment Reports.*

16.4.1 Study Area

The study area is the Site, as well as the surrounding area (within 200m) in relation in relation to land use and utility networks that could be impacted by the Proposed Development.

The Site is located within the SSE Tarbert boundary which occupies an area of approximately 42ha (X: 475237; Y: 5826671).

The Site is located in Tarbert, County Kerry (Co. Kerry), approximately 1.8km north of Tarbert. According to the 2016 Census[6], the population of Tarbert in 2016 was 540 see Plate 16.1.

Plate 16.1: Surrounding Environs and the Site [5]

16.4.2 Land Use, Ownership and Access

The Site (red line boundary) is approximately 15.18 hectares (ha) and lies entirely within the existing SSE Tarbert site with the majority under the management of the Applicant, refer to Plate 16.2.

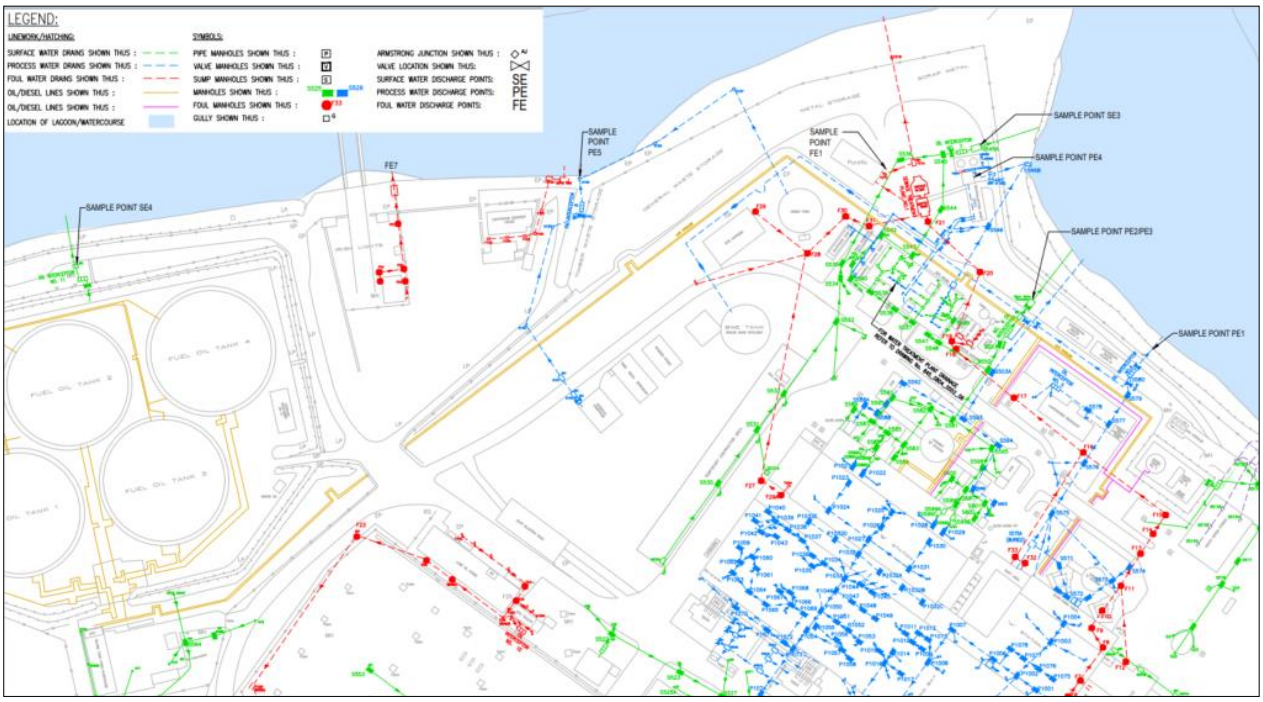
The SSE Tarbert site is off the N67, a National Secondary Road in Tarbert, Co. Kerry. The Site is surrounded by electricity generating transmission and fuel storage infrastructure (some of which is outside of the Site but within the SSE Tarbert site. The Site will be accessed via the N67, from the southern and northern entrances, which also serve the existing SSE Tarbert site and the Tarbert-Killimer Ferry Terminal. The N67 connects the Site to the N69 Tralee / Limerick Road, located 1.8km south of the Site. The Site is zoned for 'Economic Development' (KCDP 9-25 Shannon Estuary) in the Kerry CDP 2022-2028.

[5] Source: Google Earth Pro - Annotations Added, website accessed in October 2023.

Plate 16.2: Site (red line boundary) and SSE Tarbert site (blue line) boundary [6]

16.4.3 Utilities

As the Proposed Development Site is located within the boundary of the SSE Tarbert site, there are underground services and existing drainage networks which transverse the Site, that will need to be diverted during the construction phase. Refer to Plate 16.3.



[6] Source: OpenStreetMap (2022). Annotations Added

Plate 16.3: Existing Underground Services[7]

16.4.3.1 Electricity Network

The electricity generating capacity of the existing Tarbert HFO Power Station is currently 620MW, consisting of four separate generating units, comprising:

- Two x 60MW oil-fired turbines.
- Two x 250MW oil-fired turbines.

In terms of existing electrical infrastructure, Tarbert HFO Power Station is connected to the national grid via a 220kV substation which is with the SSE Tarbert site (to the south of the proposed OCGT). Lower voltage supplies are available on the SSE Tarbert site from 110kV substation.

Within the SSE Tarbert site, the existing Tarbert HFO Power Station is connected to the ESB substation by overhead lines, where power from the Tarbert HFO Power Station is provided to the national electricity transmission grid. The ESB Substation is partially located within the Proposed Development Site with the entirety within SSE Tarbert site (blue line).

16.4.3.2 Wastewater Services (Surface and Foul Water)

The existing drainage / storm water system onsite collects all water from impervious surfaces (building roofs, hardstanding/ paved areas) and pipes it to an underground drainage system. Surface water/ storm water is discharged to the Shannon Estuary via nine emissions points. All runoff with the potential to become contaminated passes though oil interceptors to retain any hydrocarbons present. The surface water/ storm water emissions points are monitored quarterly.

Process water from the demineralisation plant of the Tarbert HFO Power Station is neutralised before being discharged to the Shannon Estuary, continuous monitoring of pH and flow is undertaken at these emission points alongside quarterly testing. Two foul sewage treatment units treat water on the SSE Tarbert site before discharging to the Shannon Estuary, the effluent from these is monitored quarterly.

Existing surface water outfall SE3 / outfall 9 and outfall 8 located adjacent to the Proposed Development Site will be utilised to enable disposal of surface water from the Proposed Development. All existing outfalls and drainage outlets have non-return flap valves or flood gates installed to prevent backflow during extreme events.

A foul water treatment network is present on the SSE Tarbert site. This consists of the following:

- Sewage Treatment Plant: No.1: Foul sewage from the Tarbert HFO Power Station is piped to the treatment plant, comprising a septic tank and a trickle filter located to the north of the existing Tarbert HFO Power Station and within the Proposed Development Site. This septic tank then discharges to Outfall 10.
- Sewage Treatment Plant No.2: This septic tank is within the SSE Tarbert site but outside of the Proposed Development Site. However, an existing toilet block located to the north of the 220Kv

[7] SSE (2014) Extract from Drawing Ref: 845_0804_0003

substation which will be demolished connects to this sewage treatment plant which is located in the adjacent to the SSE Tarbert site and discharges to Outfall 24 into the lagoon.

16.4.3.3 Water Supply Network

There is an existing water supply which enters the SSE Tarbert site on the south-east boundary into the service reservoir positioned on the eastern boundary of the SSE Tarbert site. The reservoir provides the water feed for the entire SSE Tarbert site and will continue to do so for the Proposed Development.

16.4.3.4 Telecommunications

There are existing SSE Tarbert telecommunication lines for telephone and fibre services at the Tarbert HFO Power Station. There are underground carrier ducts existing within the SSE Tarbert site. No interference is expected to be encountered to telecommunications as the new stacks associated with the Proposed Development are of a smaller scale than the structures and stacks associated with the Tarbert HFO Power Station.

16.4.3.5 Other Utilities

Other utilities on the SSE Tarbert site include potable water supply.

16.5 Potential Impacts

This section contains an assessment of the potential impacts of the Proposed Development on 'built services'. The assessment takes description of the:

- 'Do nothing scenario' which assesses the relevant aspects of the current state against the likely evolution of the site without implementation of the Proposed Project.
- Evaluation of implementation of the construction, operational and decommissioning phases of the Proposed Project and description of the likely significant effects of the project on 'build services.'

The evaluation of effects on built services comprises a qualitative assessment based on the quantitative and qualitative analysis of potential effects on the environment undertaken in other chapters of this EIAR. The assessment also takes into account a review of relevant literature and professional judgement in relation to potential impacts on built services.

There is potential for disruption to existing materials assets on-site during the construction phase. Construction works are likely to take place over a period of 29 months. The construction phase will commence in Q2 2024 with the projected completion of the Proposed Development by Q4 2026.

16.5.1 Do Nothing Scenario

In the 'do nothing' scenario, the Proposed Development would not be constructed and the proposed operational activities at the site would not commence, and the status quo would remail as it is. There would be no impact with regard to the upgrade and / or connection of utilities proposed as part of the Proposed Development.

However, an alternative location/ project would be required to assist Ireland in process of transitioning from a centralised, fossil fuel-based electrical power generation model to a more distributed renewable-based generation system.

Under the 'do nothing' scenario and the development not being constructed the Applicant would be unable to generate electrical capacity from the Proposed Development, thus would reducing security of supply for Ireland. As the existing Tarbert HFO Power Station will no longer operate after December 2023 and generating will no longer generate electricity to the grid. The TEG Plant will remain being operational but only operating for maximum 500 hours per annum that being under used to its potential. This will have an impact on the security of electricity supply for the Country Ireland, increasing the potential risk of demand not being achieved.

16.5.2 Potential Impacts of the Proposed Development

Potential impacts evaluation of implementation of the construction, operational phases of the Proposed Project and description of the likely significant effects of the project on build services are described below.

Decommissioning phase effects are similar to the construction phase effects and it is considered in separate section.

16.5.2.1 Land Use, Ownership and Access

Construction Phase

The land use on the Site is industrial, as it is within the SSE Tarbert site. Therefore, there are no effects associated with the change of land use.

During the construction phase, construction traffic will use the existing SSE Tarbert entrances off the N67 and will function independently of both the existing Tarbert HFO Power Station and the TEG plant both of which are within the SSE Tarbert site, with TEG being outside of the Proposed Development Site boundary.

In terms of significance, there will be a **Negligible** sensitivity associated with the land use and access. Therefore, it is anticipated that the significance of impact without mitigation will be **Neutral.**

Operational Phase

The land use on the Site is industrial, as it is associated with SSE Tarbert. The Tarbert HFO Power Station will no longer operate after December 2023 and the TEG Plant will remain being operational. Therefore, there are no effects associated with the change of land use or access during the operational phase of the Proposed Development.

16.5.2.2 Utilities

Electricity Network

Construction Phase

During the construction phase, electricity will be required by the Contractor, and this will be provided to the construction areas and compounds, using diesel generators. A short-term connection outage may be required to facilitate this connection.

In terms of significance, facilitating the connection will be a **Low** sensitivity associated with the existing electricity network and supply. The magnitude of impact will be **Minor** as there will be a minor change in utilities required. As a result, for the existing electricity network, the significance of impact without mitigation will be **Not Significant / Slight**, and **short-term** in duration.

Operational Phase

As noted, power will be conveyed to the existing substation on the SSE Tarbert site (via overhead cabling).

The proposed new cabling route for the Site is designed and it will be constructed by SSE. The Tarbert HFO Power Station will no longer operate after December 2023 and the TEG Plant will remain being operational but only operating for maximum 500 hours per annum that being under used to its potential.

This will have an impact on the security of electricity supply increasing the potential risk of demand not being achieved.

The existing grid infrastructure has a **Low** sensitivity as the substation already exists and only an additional connection is required. The magnitude of impact will be **Moderate** as there will be additional power generation created (350MW) as a result of the Proposed Development. The significance of impact without mitigation will be **Slight** and **Positive**, and **Long-Term** in duration.

Wastewater Services (Surface, Foul and Process Water)

Construction Phase

During the construction phase, the following potential surface water impacts may occur:

- sedimentation of surface water features from construction works.
- pollution of surface waters from accidental spills and leaks of fuels and chemicals.

Various construction activities have the potential to release sediment and cause unacceptable sediment levels in the catchment area. Site stripping and bulk earthworks would leave deposits exposed to temporary erosion by wind and / or rain. This has the potential to lead to temporary increases in sediment loading of the surface water network. Contamination from suspended sediments may also be caused by run-off from material stockpiles.

Run-off containing large amounts of suspended solids could potentially adversely impact on surface water. The impact is considered a direct effect of a **Negative** nature and **Temporary** duration given it is only associated with the construction phase. Run-off containing large amounts of suspended solids is considered unlikely (with implementation of mitigating measures) to occur and should it occur, is likely to be **Temporary**.

During the construction phase, there is a risk of accidental pollution incidences from the following sources:

- spillage or leakage of oils and fuels stored on-site.
- spillage of oil or fuel from refuelling machinery on-site.
- spillage or leakage of oils and fuels from construction machinery or Site vehicles; and
- the use of wet concrete and cement
- spillage from portable sanitary facilities.

The SSE Tarbert site is currently serviced by an existing surface water drainage network. During the construction phase this existing drainage system (outfall SE3, Outfall 8 and Outfall 9) located adjacent

to the Site will be upgraded as part of the Proposed Development to allow additional surface water disposal from the Site which will be required as a result of the increase in impermeable surface area.

In terms of significance, there will be a **Medium** sensitivity associated with the surface water environment. The magnitude of impact will be **Moderate** and the significance of impact without mitigation will be **Moderate**, and **Short-Term** in duration. Refer to EIAR Volume I Chapter 12 (Water Environment) for further details on surface water.

During the construction phase foul water arising from welfare facilities within the Construction Compound, be collected and periodically removed from the Site by road tanker to a licensed water treatment plant. As this control measure will be incorporated into the Site set-up, additional specific mitigation measures are therefore not required to address foul sewage during the construction phase and are not discussed further.

Operational Phase

During the operational phase, surface water run-off will be generated from all hard surfaces within the Site which are exposed to rainwater or to which water is applied during wash down. This will include all hardstanding surfaces, roofs, and other impermeable surfaces. As noted previously, surface water is collected by means of the underground drainage network and will pass through an oil separator and oil interceptor prior to being discharged to the Shannon Estuary in accordance with best available techniques.

Surface water will drain at a controlled rate to the existing surface water network and discharge at SE3/ Outfall 8 and 9. The proposed drainage layouts are presented in Appendix 12B (refer to EIAR Volume II) submitted with this application.

There is a potential for increases in volume and rate of surface water run-off from new impervious areas, leading to an impact on flood risk, upstream and downstream of the Site.

Impacts on receiving waterbodies from anthropogenic pollutants in surface water run-off (including accidental fuel spillages from the proposed 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 impact will be **Imperceptible**.

The proposed production of demineralised water Production of demineralised water will result in process wastewater which will be discharged to the surface water drainage system. The wastewater will contain the naturally occurring minerals removed from the mains water. Wastewater will be treated to adjust the pH to neutral range before discharge. This discharge will be controlled so it does not give rise to significant effects.

HVO contains low levels of impurities which are removed prior to use in the OCGT by means of a fuel polishing system. Waste generated by the fuel polishing system will be stored in a tank. The waste from the tank will contain hydrocarbons and will periodically be disposed offsite by road tanker in compliance with the Waste Management Act 1996, and associated regulations.

The internal blading of the gas turbine accumulates deposits from the air over time which requires periodic washing. The frequency of washing is a function of operating hours and ambient air characteristics. The turbine is rotated slowly in a water and detergent solution. Wastewater generated

from blade washing will be collected in a dedicated drain tank for disposal offsite by road tanker in compliance with the Waste Management Act 1996, and associated regulations for disposal.

The Tarbert HFO Power Station will no longer operate after December 2023 and the TEG Plant will remain being operational but only operating for maximum 500 hours per annum that being under used to its potential. Impacts on receiving waterbodies from anthropogenic pollutants in relation to the operational phase will be similar to the future scenario without the Proposed Development. As a result, the significance of impact will be **Imperceptible**.

16.5.2.3 Water Supply Network

Construction Phase

During the construction phase water supply for construction works will be provided by means of the existing Irish Water mains water connections on-site which feed into the on-site reservoir and also into the existing Tarbert HFO Power Station. The Contractor will submit a pre-connection application to Irish Water for this temporary connection. As a result, there is potential for a **Temporary** impact to the existing mains water connection on-site, by way of temporary (during installation) disruption in water supply to SSE Tarbert if additional connections points need to be obtained.

In terms of significance, there will be a **Low** sensitivity associated with the existing water supply network at SSE Tarbert. The magnitude of impact will be **Negligible** and the significance of impact without mitigation will be **Not Significant / Slight**, and **Temporary** in duration.

Operational Phase

During the operational phase, water will be supplied to the Site via the existing Irish Water mains water connection that feeds the reservoir, the existing connection is sufficient to provide quantities needed during operational phase.

During the operational phase, water will also be used welfare facilities and if required for firefighting purposes and NOx Control. Water supply to the firewater storage tank will be from an existing Irish Water connection, with a storage tank of approximately 5900m^3.

Fire water discharges will be collected in the surface drainage system and will be tested before being discharged from the Site after passing through the drainage interceptors.

In terms of significance, there will be a **Low** sensitivity associated with the existing water supply network. The magnitude of impact will be **Low** as there will be less demand on the existing water network. As a result, for the existing water network, the significance of impact without mitigation will be **Low**, and **Long-Term** in duration.

Telecommunications

Construction Phase

During the construction phase, communications supply to the proposed OCGT will be laid. Power and communications supply to proposed OCGT will be provided by buried cables.

Existing telecommunications infrastructure will be utilised during the construction phase, where necessary the construction contractors will provide their own connections.

A short-term connection outage may be required to facilitate this connection. In terms of significance, there will be a **Low** sensitivity associated with the existing telecommunications infrastructure. The magnitude of impact will be **Negligible** and the significance of impact without mitigation will be **Not Significant / Slight**, and **Temporary** in duration.

Operational Phase

During the operational phase the Proposed Development will connect to the existing telecommunications infrastructure on the SSE Tarbert site, which will result in a marginal increase in demand in comparison to future scenario of the Tarbert HFO Power Station no longer operating after December 2023 and the TEG Plant remaining operational.

The location of the site and Proposed Development infrastructure will not have the potential to impact on telecommunication signals due to its remote location and the development will not produce electromagnetic shadow volume.

In terms of significance there will be a **Low** sensitivity associated with the existing telecommunications infrastructure. The magnitude of impact will be **Negligible**.

16.5.3 Decommissioning Phase

A Decommissioning Plan (which will include a Decommissioning Environmental Management Plan (DEMP)) will be prepared and agreed with the EPA as part of the permit surrender process. The DEMP will consider the potential environmental risks at the Site and provide guidance and appropriate mitigation procedures as necessary, to minimise risk.

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 equipment, all residues and operating chemicals will be cleaned out from the plant and disposed of at a suitably licenced facility. The majority of the plant and equipment will have some limited residual value as scrap or recyclable materials and will be recycled at the time.

It is expected that decommissioning will take up to one year. 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. Refer to EIAR Volume I Chapter 5 (Description of the Proposed Development).

16.6 Mitigation Measures

Construction phase mitigation measures include avoidance, reduction, and remedy measures to reduce or eliminate any significant adverse impacts identified.

16.6.1 Construction Phase

16.6.1.1 Construction Environmental Management Plan (CEMP)

An CEMP has been prepared as part of this planning application (refer to Appendix 5A, EIAR Volume II). The CEMP will be further refined and expanded by the appointed Contractor following the grand of planning permission.

The CEMP will detail the Contractor's overall management and administration of the works and in agreement with the planning authority in accordance with CEMP submitted with this planning application. The CEMP will also include any commitments included within the statutory approvals. The CEMP will be treated as a live document throughout the lifecycle of the Proposed Development, requiring regular review and update as necessary.

16.6.1.2 General Mitigation Measures

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

- Works during the construction phase, including service diversions and realignment will be carried out in accordance with relevant guidance documents, including the ESB's *Code of Practice for Avoiding Danger from Overhead Electricity Lines'*, and the Health and Safety Authorities (HAS, 2019) '*Code of Practice for Avoiding Danger from Underground Services'*.
- Works during the construction phase will be carried out in accordance with SSE's Safe Systems of Work (SSOW).
- The appointed 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.

16.6.1.3 Land Use

No mitigation or monitoring measures have been proposed for land use.

16.6.1.4 Wastewater Services (Surface and Foul Water)

Surface water mitigation measures are outlined in EIAR Volume I Chapter 12 (Water Environment), and therefore are not repeated here.

16.6.2 Operational Phase

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

However, routine maintenance will be carried out in accordance with the maintenance procedures provided by the contractor and manufacturer.

These works will generally take place during the summer months, when demand for the Proposed Development is at its lowest. Also, during this period maintenance on balance of plant will also be undertaken.

Process wastewater during the operational phase will be regulated and monitored under the IE Licence.

16.7 Residual Impacts

All material assets after mitigation will have a **Neutral** or **Not Significant** residual effect once mitigation measure including those within the CEMP are taken into account.

16.8 Cumulative Effects

Cumulative effects are defined as" the combination of many minor impacts creating one, larger, more significant effect" (Table 3.4 Descriptions of the effects, EPA 2022)[8]. Cumulative effects consider existing stresses on the natural environment as well as developments that are in construction, operation and proposed pre-planning.

A search of planning applications within 5km of the Site is presented in Chapter 4, EIAR Volume I. The 5km search area was used due to the rural nature of the area and the existing sparse development, other known developments with the possibility of having cumulative effects with the Proposed Development.

The applications of note for the cumulative effects are:

- Designated Development of three x 50MW OCGT generating plant (Tarbert TEG) (Planning refs. ABP-315838-23).
- Works within Tarbert Generating Station to the 220kV switchgear within the existing Tarbert substation compound including removed of an existing cable joint (Planning ref.: 23350).

There is the potential for cumulative effects associated with further temporary disruptions to existing utilities in the local area and increased demands on existing utilities if these developments are constructed at the same time as the Proposed Development. There is also a potential for cumulative effects associated with accidental spills and leaks and the use of concrete and lime (to the surface water network) and potential impact on ecological receptors.

Potential disruptions to existing utilities will be Slight or Moderate given the position of projects within the SSE Tarbert site to one another. It is not unreasonable to assume that the committed developments, which have also gone through the planning process, will also implement standard and best practice mitigation measures to the extent that impacts are not significant. Providing standard best practice control measures are implemented as required on all sites, the cumulative impact will **Negligible.**

16.9 Summary

It is concluded that the residual effects on material assets will be **Neutral** or **Not Significant** once mitigation measures including those within the CEMP are taken into account.

There is a potential for cumulative effects associated with further temporary disruptions to existing utilities and increased demands on existing utilities. However, providing standard best practice control measures are implemented as required on all sites, the cumulative impact will be **Not Significant**.

[8] Guidelines on the information to be contained in Environmental Impact Assessment, EPA (2022).

There will be no requirement for additional mitigation measures during the operational phase. However, routine annual maintenance will be carried out in accordance with the maintenance procedures provided by the Contractor and manufacturer.

16.10 References

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