

# SSE Tarbert Next Generation Power Station

Environmental Impact Assessment Report (EIAR)  
Volume I  
Chapter 01 Introduction

SSE Generation Ireland Limited

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# 1. Introduction

## 1.1 Background

This Environmental Impact Assessment Report (EIAR) has been prepared by AECOM Ireland Ltd. on behalf of SSE Generation Ireland Limited (SSE) (herein referred to as “the Applicant”). SSE are seeking planning permission for the proposed Open Cycle Gas Turbine (OCGT) power plant, administration building and workshop, and ancillary plant, site works and services (as described in more detail in EIAR Volume I Chapter 5) (herein referred to as the ‘Proposed Development’). The Site of the Proposed Development (herein referred to as ‘the Proposed Development Site’) is located within the existing SSE Tarbert Power Station site (‘SSE Tarbert’), in Tarbert, County Kerry (Co. Kerry).

The application boundary (‘red line boundary’) for the Proposed Development encloses an area of approximately 15.18 hectares (ha.) and encompasses land within the SSE Tarbert site (‘SSE Tarbert’), which is an area of 42ha, that is mostly under the management of the Applicant. The Proposed Development will connect to an existing electrical substation on the SSE Tarbert site.

This EIAR presents:

- A description of the Proposed Development.
- Details of the Proposed Development Site, location and layouts considered.
- The likely significant environmental effects of the construction, operation (including maintenance) and decommissioning of the Proposed Development; and
- Measures to avoid or reduce such effects.

This EIAR is provided in accordance with Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, as amended by EIA Directive 2014/52/EU (EIA Directive) and S.I. No. 296/2018 – European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (herein referred to as ‘EIA Regulations’), in order to inform the consideration of the Planning Application and provide the planning authority with the environmental information that must be taken into account when determining the application. The application area lies entirely within the administrative boundary of Kerry County Council (KCC) and notice of the application has been served to KCC accordingly, however the application will be submitted to An Bord Pleanála (ABP) for determination (see Section 1.3 for more details).

### 1.1.1 Overview of this Chapter

This chapter of the EIAR provides an overview of the Proposed Development, the Environmental Impact Assessment (EIA) methodology, structure of the EIAR, and is accompanied by Appendix 1A Scoping Review Table and Appendix 1B EIAR Technical Team, refer to EIAR Volume II.

This chapter is supported by Figure 1.1 (refer to EIAR Volume III) which illustrates the Proposed Development Site location.

For the purposes of the assessment, the following terms are used to describe the Proposed Development Site and its context:

- **‘The Proposed Development’** – also referred to as ‘Tarbert Next Generation Power Station’ relates to the 1 no. Open Cycle Gas Turbine (OCGT) plant, fuel storage and unloading facility, water storage tanks, surface water drainage system, electrical grid connection to substation and all associated ancillary development, site works and services, for which planning permission is being sought, which will be submitted to ABP for determination. Full details are included in EIAR Chapter 5.
- **‘The Proposed Development Site’** – also known as ‘the Site’, ‘the red line boundary’ or ‘planning application boundary’ relates to the area where the Proposed Development is located as delineated by the red line boundary. Refer to EIAR Volume III Figure 1.1.
- **‘Tarbert HFO Power Station’** – is the existing power station built in the 1960’s which runs on heavy fuel oil (HFO), which will cease operating in December 2023.
- **‘SSE Tarbert’** – relates to the wider Tarbert power station site which includes the Tarbert HFO Power Station (which will cease operating at the end of December 2023), the Temporary Emergency Generation (TEG) Power Plant (under construction), the National Oil Reserves Agency (NORA) mainland tank farm and the existing jetty facility; and
- **‘The TEG (Temporary Emergency Generation) Site’** – relates specifically to 3 no. OCGT plant installations with a combined output of 150MW under construction and which will be temporarily installed on an area of land within the SSE Tarbert site (Planning Ref. ABP-315838). This plant will commence decommissioning in 2028/2029.

The Proposed Development will be accessed via the existing SSE Tarbert site entrances (the main site entrance and the secondary/construction site entrance) off the N67 and would function independently of both the existing Tarbert HFO Power Station and the TEG Site. The Proposed Development will be capable of generating 350MW of electricity and would benefit from being located in an established and existing industrial power station site with existing connections to the wider electricity grid network. The Proposed Development includes a connection to the existing substation on the SSE Tarbert site. The electrical connection infrastructure required will be entirely ancillary to the Proposed Development, within the SSE Tarbert site will not constitute ‘transmission infrastructure’ under Section 182 of the Act.

### 1.1.2 The Applicant

The Applicant, is an SSE Thermal Generation Holdings Limited company, wholly owned by SSE plc. SSE plc’s purpose is to provide energy needed today while building a better world of energy for tomorrow. SSE plc is a leading generator of renewable electricity in the UK and Ireland and one of the largest electricity network companies in the UK. SSE plc develops, owns, and operates low carbon infrastructure to support the zero-carbon transition. This includes onshore and offshore wind, hydro power, electricity transmission and distribution grids, and efficient conventional generation, alongside providing energy products and services for businesses and homes. SSE plc plans to invest up to £40bn over the next decade, to deliver cleaner, secure, and more affordable energy. SSE plc is UK listed, is accredited under real Living Wage and Fair Tax Mark and in Ireland holds the Business Working

Responsibly mark. SSE plc entered the Irish market in 2008 through the acquisition of Airtricity and has expanded through organic growth and a number of acquisitions, now employing almost 1,000 people on the island of Ireland and a key participant in the all-island Single Electricity Market. SSE's activities in Ireland include:

- SSE Renewables owns 784MW of onshore wind capacity across 22 windfarms on the island, and operates a total of over 1,000MW. This includes Galway Wind Park, Ireland's largest and best performing onshore wind farm (co-owned with Greencoat Renewables). SSE Renewables is currently constructing additional onshore wind capacity in Ireland, and is actively developing solar and battery projects, as well as additional onshore and offshore wind projects.
- SSE Airtricity supplies electricity and gas to over 700,000 home and business customers across the island and delivers home energy upgrades through our one stop shop, the Generation Green Home Upgrade, which aims to deliver 50,000 home energy upgrades by the end of the decade.

SSE Thermal operates an industry-leading fleet of flexible generation and energy storage assets. SSE Thermal believes flexible and efficient thermal energy will play a critical role in the transition to a net zero future, complementing renewable generation and maintaining security of supply. In terms of thermal power generation assets, SSE Generation Ireland Ltd operates an industry leading fleet of flexible generation assets in Ireland:

1. 620MW Tarbert Power Station (oil) is situated on the Shannon Estuary in SSE Tarbert, Co. Kerry. The station comprises two 60MW and two 250MW oil-fired turbines. The existing units are required to cease generation by the end of 2023 in line with the station's Industrial Emissions Licence.
2. Great Island Power Station is a 464MW Combined Cycle Gas Turbine (CCGT) (gas), located on the shores of Waterford Harbour at Great Island, Co. Wexford. The gas-fired station entered commercial operation in 2015, replacing the former oil-fired station at the site. It is now one of the cleanest and most-efficient power stations on the island of Ireland, generating enough electricity to power half a million Irish homes.
3. Rhode Power Station is a 104MW OCGT plant (gas/oil) situated at Rhode, Co. Offaly. It commenced commercial operation in 2004.
4. Tawnaghmore Power Station is a 104MW OCGT (gas/oil) plant situated south of Killala in Co. Mayo. It commenced commercial operation in 2003.

SSE's vision is to become the leading provider of flexible thermal energy in a net-zero world, and therefore has an important role in accelerating the transition to net zero. The Applicant is looking at opportunities to decarbonise and enable the transition to net zero across the SSE thermal assets in Ireland.

## 1.2 Overview of the Proposed Development

The Proposed Development consists of a gas turbine operating in open cycle gas turbine (OCGT) mode fuelled by Hydrotreated Vegetable Oil (HVO) with an output of 350MW, fuel pipes, storage and

unloading area, water storage tanks, electrical grid connection and all associated ancillary development, site works and services (for information on sustainability of HVO please refer to EIAR Volume I, Chapter 17 Climate).

An OCGT plant has been selected for the Proposed Development as the equipment can respond to changes in the electricity demand by starting up quickly and achieving full output within a short period of time.

The Proposed Development will comprise of the following main components (refer to Chapter 5 EIAR Volume I for more details):

- OCGT generating plant and associated building.
- Emissions stack 55m in height (external diameter 9m) with continuous environmental monitoring systems (CEMS) platform.
- Selective Catalytic Reduction (SCR) and air dilution fans, filters and exhaust gas/ ammonia mixing skids.
- Fin fan coolers.
- Main and auxiliary transformer with a blast wall separating.
- Fire suppression enclosure/skid.
- Aqueous ammonia tank.
- Ignition propane gas tank and compound.
- Demineralisation water treatment plant.
- Demin water tanks (2 No. x 7,500m<sup>3</sup> capacity).
- Raw water and fire storage water tank (5,900m<sup>3</sup> capacity).
- Fire water module.
- HVO storage tanks 3 No. tanks in total with two unloading bays.
- Fuel polishing building.
- HVO pipework (approximately 200m).
- Electrical connections from main transformer (unit) to 220kV substation.
- New wastewater treatment plant.
- Administration building and workshop.
- Stores.
- Carparking.
- Flood defence works; and
- Demolition works (removal of existing buildings).

EIAR Chapter 3: Need and Alternatives (EIAR Volume I), provides details of the alternatives considered and how the Proposed Development layout was selected.

### 1.2.1 Site Area

The Proposed Development Site is situated north of Tarbert, Co. Kerry, Ireland (Irish Grid Reference X: 475237; Y: 5826671). The entire SSE Tarbert site is located within the administrative area of KCC.

The Proposed Development Site, which is brownfield land located west of the N67, a National Secondary Road in Tarbert, is within the SSE Tarbert site. The area available for the Proposed Development (the red line boundary) is 15.18ha.

A full description of the Proposed Development Site is detailed in Chapter 4: Existing Site and Conditions (EIAR Volume I).

### 1.2.2 Site History

The Tarbert HFO Power Station at SSE Tarbert was developed in the 1960's, it is a 626MWe HFO fired power plant, which had been operational since 1969. The SSE Tarbert site is located on the southern shore of the Shannon Estuary, on Tarbert Island, originally agricultural land, connected to the mainland via a causeway.

There are four generating units at the station, two with a capacity of 57MWe each and two with a capacity of 256MWe each. The Tarbert HFO Power Station was constructed in two stages, units one and two commissioned in 1969 (57MWe each) and units three and four commissioned in 1976 and 1977 (256MWe each). Units three and four were refurbished in 2003 and 2004 and are fuelled by HFO with both Gas Oil and propane used as a start-up fuel. Each of the units are independent and consist of a boiler, steam turbine and auxiliary plant.

There are a number of fuel storage tanks adjacent the existing Tarbert HFO Power Station. The 'Island Tank Farm' within the Proposed Development Site comprises four HFO tanks, each with the capacity of 25,000 tonnes. At present, only two of these tanks are in use while the other two are currently not used. The 'Mainland Tank Farm' located 350m to the west of the Proposed Development Site includes 4 no. tanks which are not related to the power generation that occurs at SSE Tarbert and are under the control of the National Oil Reserves Agency (NORA) providing a national reserve.

The existing Tarbert HFO Power Station employee numbers have decreased over time and there will be 14 staff employed on the SSE Tarbert site as of Q3 2023, providing 24 hours per day, 365 days per year presence to operate SSE facilities including Rhode and Tawnaghmore Power Stations.

A summary of historic planning applications on the SSE Tarbert site is provided in Table 4.1, of Chapter 4 EIAR Volume I.

The Proposed Development Site location is shown in Figure 1.1 and the Site Setting on Figure 4.1 (refer to EIAR Volume III). The following text includes details of the relevant features in relation to the Proposed Development Site:

- Within – Areas of hardstanding, outbuildings which vary between storage sheds and workshops for the existing Tarbert HFO Power Station, the existing Tarbert HFO Power



Station, staff car parking and visitor's car parking area, the northern and southern site entrances, part of the ESB 220kV electrical transmission substation, and the power station reservoir.

- North –Tarbert Lighthouse and the Shannon Estuary.
- East –the N67 National Secondary Road and the Shannon Estuary.
- South-east –the Tarbert – Killimer ferry terminal, the N67 National Secondary Road and residential receptors.
- South – the TEG site, a lagoon draining the Shannon Estuary and agricultural lands further south of the mainland.
- South-west – the TEG site and the National Oil Reserves Agency (NORA) tank farm; and
- West – the Shannon Estuary.

Access to the Proposed Development Site will be via the existing SSE Tarbert entry points off the N67 of which there are two.

## 1.3 Environmental Impact Assessment Report (EIAR)

This EIAR has been prepared in accordance with the EIA Directive and in accordance with the requirements of the EIA Regulations and relevant guidance documents as listed in Section 1.6, in order to inform the consideration of the planning application and provide the planning authority with the environmental information that must be taken into account when determining this planning application.

In Irish legislation, Section 172 of the Planning and Development Act (as amended) ('the Act') establishes the requirement for EIA.

The Act, states:

*'An environmental impact assessment shall be carried out by the planning authority or the Board, as the case may be, in respect of an application for consent for proposed development where either—*

*(a) the proposed development would be of a class specified in—*

*(i) Part 1 of Schedule 5 of the Planning and Development Regulations 2001,*

*and either -*

*(I) such development would exceed any relevant quantity, area or other limit specified in that Part, or*

*(II) no quantity, area or other limit is specified in that Part in respect of the development concerned,*

*Or*

*(ii) Part 2 of Schedule 5 of the Planning and Development Regulations 2001*

*and either—*

*(I) such development would exceed any relevant quantity, area or other limit specified in that Part, or*

*(II) no quantity, area or other limit is specified in that Part in respect of the development concerned,*

*Or*

*(b) (i) the proposed development would be of a class specified in Part 2 of Schedule 5 of the Planning and Development Regulations 2001 but does not exceed the relevant quantity, area or other limit specified in that Part.*

*And*

*(ii) the planning authority or the Board, as the case may be, determines that the proposed development would be likely to have significant effects on the environment.'*

The classes of development where an EIA is mandatory are set down in Planning and Development Regulations, 2001 – 2023 (the Regulations) made pursuant to Section 176 of the Act. In addition, Schedule 5 of the Regulations sets out thresholds for projects, and if that threshold is equalled or exceeded an EIA must be carried out. These are mandatory requirements. Finally, where a project is of a type listed in the regulations but does not equal or exceed the applicable threshold then the likelihood of the project having significant effects on the environment – as considered against a range of prescribed criteria, must be assessed.

The Proposed Development, comprises an industrial installation for the production of electricity with an output in excess of 300MW, is within the descriptions of development in the Planning and Development Regulations, 2001, Schedule 5 of the Regulations, regarding Development for the purposes of Part 10:

*2.(a) A thermal power station or other combustion installation with a heat output of 300 megawatts or more.*

An EIA for the Proposed Development is mandatory for any Strategic Infrastructure Development (SID). A Pre-Application SID consultation was held with ABP on 28 August 2023 and the general scope and format of the EIAR was presented.

It was presented to ABP that the Applicant would be submitting an EIAR with the Planning Application, as required for SID applications.

### **1.3.1 EIA Approach**

EIA provides a system of sharing information about the environment which enables likely environmental effects to be foreseen and prevented during the design and consent stages of a development, and for residual effects to be taken into account by the relevant consenting authority. This helps to protect the environment and informs and improves decision-making. The EIAR presents an objective and concise record of the process and the determination of likely significant environmental effects.

The EIAR requirements for consultation are defined under Article 6 of the EIA Directive. Statutory Authorities referred to in Article 6 (1) will be consulted on the specific characteristics of the project, including its location, technical capacity, and its likely impacts on the environment.

Additionally, in accordance with the requirements of the Aarhus Convention, the public statutory authorities, and relevant stakeholders will be given the opportunity to participate in the decision-making process. This integration will allow for the sustainable implementation of the environmental management of a development.

In the preparation of this EIAR, the following approach to assessment has been applied:

- Review – compiling relevant background data and identifying issues and constraints.
- Baseline Surveys (November 2022 – September 2023) – site walkover visits, detailed specialist surveys and discussions with relevant statutory and other consultees, to determine the nature and status of the existing environment.
- Impact Assessment – assessing likely significant environmental effects of the Proposed Development during construction, operation (including maintenance) and decommissioning.
- Determine Mitigation measures to form part of the final design of the Proposed Development.
- Assessment of residual environmental effects and their significance; and
- Assessment of Indirect, Secondary and / or Cumulative Environmental Effects and Inter-relationships.

Detailed assessment has involved impact analysis according to accepted methodologies, consultations, and site visits leading to the evaluation of the significance and magnitude of any direct, indirect, secondary, cumulative, short, medium, and long-term, permanent, and temporary, positive and negative effects on the environment from the Proposed Development.

These assessments have enabled mitigation measures to be developed which will be implemented to avoid, reduce, or remediate likely significant environmental effects.

This EIAR describes the investigations, findings, and conclusions of the assessment, and any proposed monitoring of the environmental effects that will be undertaken during and after the construction of the Proposed Development.

An explanation of the approach to undertaking the assessment and producing the EIAR is detailed in Section 1.4. In summary, this EIAR has compiled, evaluated, and presented the likely significant environmental effects of the Proposed Development. The assessment is designed to help detecting likely significant effects, thus leading to the identification and incorporation of appropriate environmental mitigation measures into the development. The main steps in the assessment procedure can be summarised as follows:

- Examine the environmental character of the area likely to be affected by the Proposed Development through baseline studies.
- Predict the potential likely significant effects on the environment, both beneficial and adverse, of the Proposed Development.
- Introduction of design and operational modifications or other measures to avoid, reduce or offset adverse effects, and where possible, achieve beneficial effects; and

- Detail the findings of the assessment in the EIAR.

### **1.3.2 Project Scoping and Review**

The purpose of the Scoping process is to determine which topics should be included in the EIAR, and the level of detail to which they should be assessed.

AECOM has undertaken a Scoping Review (see Appendix 1A EIAR Volume II). The Scoping Review has been prepared by the AECOM EIA technical teams to enable the scope of the assessment to be defined. A formal request for scoping under Section 37D of the Act was not made.

### **1.3.3 Pre-Application Engagement**

The Pre-Application process included a meeting and presentation with ABP as the Planning Authority, and Kerry County Council (KCC) as the local authority. Further details in relation to the consultation process are provided within EIAR Volume I Chapter 6.

The National Parks and Wildlife Service (NPWS) were also engaged in relation to biodiversity, please refer to EIAR Volume I Chapter 9 Biodiversity for more details.

### **1.3.4 Consultations**

Formal consultations have been undertaken prior to the submission of this EIAR, they have included formal and informal processes, more details of which are located within EIAR Volume I Chapter 6.

## **1.4 The Assessment Approach and Methods**

The assessment of impacts has been conducted in accordance with EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (May 2022) with reference to the following general approach. The specific methodology adopted for each assessment is contained in the individual technical chapters. Likely significant effects arising from the Proposed Development have been identified and described and an assessment of the level of significance for each effect determined. Determination of the significance of the effects is a key stage in the assessment. The criteria for assessing sensitivity and magnitude level have been defined for each environmental topic in the appropriate section of the EIAR and may vary from the general approach set out in this section. The overall significance of an effect, taking the relationship between sensitivity and the magnitude level of impact into consideration, is also defined for each environmental subject.

### **1.4.1 Assessment Methodology**

This EIAR has assessed the different phases of the Proposed Development including the construction phase, operational phase and decommissioning phase. Each phase has been assessed against the baseline, including the future baseline. The phases are as follows:

- Baseline – Based on current baseline which includes the TEG plant construction period which is ongoing.
- Construction phase scenario – The assessment of the Proposed Development construction phase, which is expected to have a duration of 29 months and consideration and assessment of any overlap with the operation phase of the TEG plant.

- Operational scenario – The assessment of the operational Proposed Development (350MW OCGT) against a future baseline scenario (i.e., the assessment will include the temporary overlap period with the existing operational TEG plant); and
- Decommissioning scenario – Assessment of the decommissioning of the Proposed Development at the end of its operational life. It is considered for assessment purposes that this will be the same as the construction phase (minus overlap with TEG plant).

### 1.4.2 Description of Effects

The term ‘significance of effects’ generally refers to the importance of the outcome of the effects which are the consequences of changes. Significance is determined by a combination of scientific (objective) and social (subjective) factors.

Table 1.1 outlines the approach to describing environmental impacts and effects in this EIAR. The methodology adopted closely follows that detailed in the EPA Guidelines (2022).

**Table 1.1: Description of Effects (Table 3.4 EPA, 2022)**

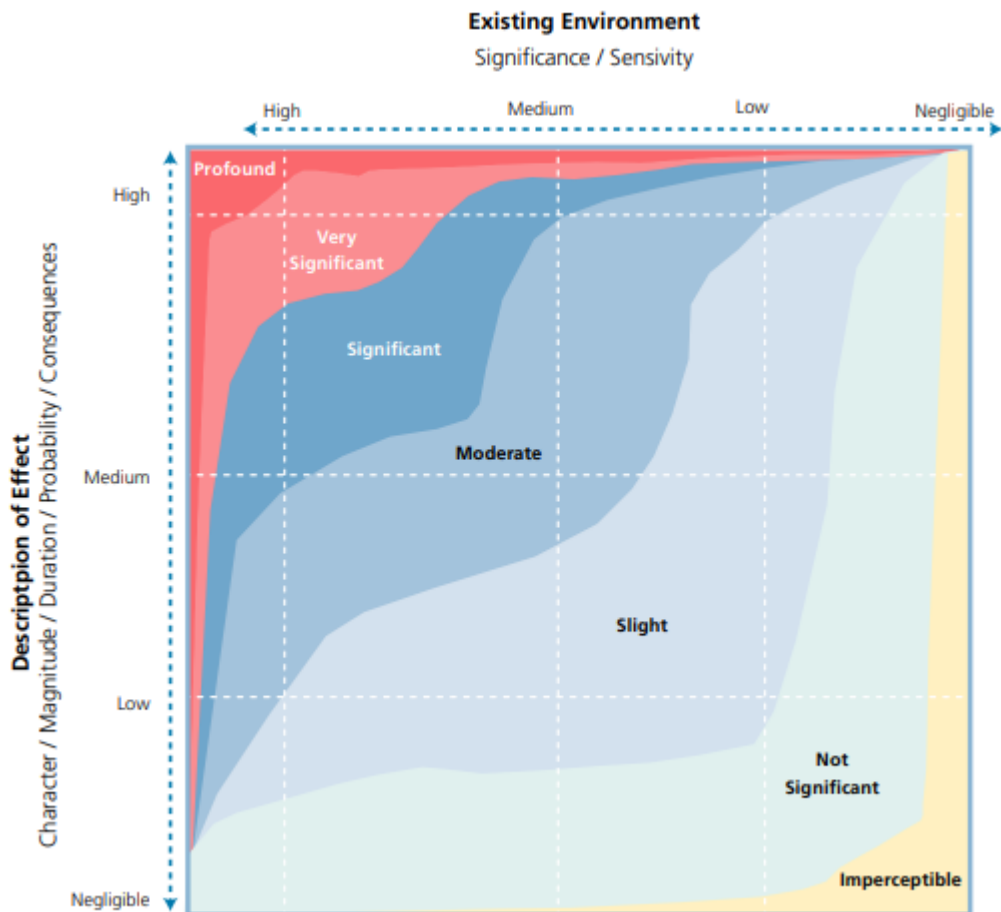
<p><b>Quality of Effects</b></p> <p>It is important to inform the non-specialist reader whether an effect is positive, negative, or neutral.</p>	<p><b>Positive Effects</b></p> <p>A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).</p>
	<p><b>Neutral Effects</b></p> <p>No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error</p>
	<p><b>Negative/Adverse Effects</b></p> <p>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 nuisance)</p>
<p><b>Describing the Significance of Effects</b></p> <p>‘Significance’ is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful (also see Determining Significance).</p>	<p><b>Imperceptible</b></p> <p>An effect capable of measurement but without significant consequences.</p>
	<p><b>Not significant</b></p> <p>An effect which causes noticeable changes in the character of the environment but without significant consequences.</p>
	<p><b>Slight Effects</b></p> <p>An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.</p>
	<p><b>Moderate Effects</b></p> <p>An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.</p>
	<p><b>Significant Effects</b></p>

	<p>An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.</p>
	<p style="text-align: center;"><b>Very Significant</b></p> <p>An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.</p>
	<p style="text-align: center;"><b>Profound Effects</b></p> <p>An effect which obliterates sensitive characteristics</p>
<p><b>Describing the Extent and Context of Effects</b></p> <p>Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly or increasingly experienced.</p>	<p style="text-align: center;"><b>Extent</b></p> <p>Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.</p>
	<p style="text-align: center;"><b>Context</b></p> <p>Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions.</p>
<p><b>Describing the Probability of Effects</b></p> <p>Descriptions of effects should establish how likely it is that the predicted effects will occur.</p>	<p style="text-align: center;"><b>Likely Effects</b></p> <p>The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.</p>
	<p style="text-align: center;"><b>Unlikely Effects</b></p> <p>The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.</p>
<p><b>Describing the Duration and Frequency of Effects</b></p> <p>'Duration' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.</p>	<p style="text-align: center;"><b>Momentary Effects</b></p> <p>Effects lasting from seconds to minutes</p>
	<p style="text-align: center;"><b>Brief Effects</b></p> <p>Effects lasting less than a day</p>
	<p style="text-align: center;"><b>Temporary Effects</b></p> <p>Effects lasting less than a year.</p>
	<p style="text-align: center;"><b>Short-term Effects</b></p> <p>Effects lasting one to seven years.</p>
	<p style="text-align: center;"><b>Medium-term Effects</b></p> <p>Effects lasting seven to fifteen years.</p>
	<p style="text-align: center;"><b>Long-term Effects</b></p> <p>Effects lasting fifteen to sixty years.</p>
	<p style="text-align: center;"><b>Permanent Effects</b></p> <p>Effects lasting over sixty years</p>

	<p style="text-align: center;"><b>Reversible Effects</b></p> <p style="text-align: center;">Effects that can be undone, for example through remediation or restoration</p>
<b>Describing the Types of Effects</b>	<p style="text-align: center;"><b>Frequency of Effects</b></p> <p style="text-align: center;">Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)</p>
	<p style="text-align: center;"><b>Indirect Effects or Secondary Effects</b></p> <p style="text-align: center;">Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.</p>
	<p style="text-align: center;"><b>Cumulative Effects</b></p> <p style="text-align: center;">The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.</p>
	<p style="text-align: center;"><b>'Do-Nothing Effects'</b></p> <p style="text-align: center;">The environment as it would be in the future should the subject project not be carried out.</p>
	<p style="text-align: center;"><b>'Worst case' Effects</b></p> <p style="text-align: center;">The effects arising from a project in the case where mitigation measures substantially fail. It can also be a worst-case assumption where there is uncertainty in the assessment or in the effectiveness of mitigation measures.</p>
	<p style="text-align: center;"><b>Indeterminable Effects</b></p> <p style="text-align: center;">When the full consequences of a change in the environment cannot be described.</p>
	<p style="text-align: center;"><b>Irreversible Effects</b></p> <p style="text-align: center;">When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.</p>
	<p style="text-align: center;"><b>Residual Effects</b></p> <p style="text-align: center;">The degree of environmental change that will occur after the proposed mitigation measures have taken effect.</p>
	<p style="text-align: center;"><b>Synergistic Effects</b></p> <p style="text-align: center;">Where the resultant effect is of greater significance than the sum of its constituents, (e.g., combination of SO<sub>x</sub> and NO<sub>x</sub> to produce smog).</p>

### 1.4.3 Determining Significance

Table 1.1. provides seven categories by which to determine the significance of an impact. Plate 1.1 is an illustration provided in the EPA Guidelines (2022) of how comparing ‘the character of the predicted effect to the sensitivity of the receiving environment can determine the significance of the effect.



**Plate 1.1: Chart showing typical classification of the Significance of Effects (Figure 3.4 of EPA EIAR Guidelines)**

### 1.4.4 Cumulative Effects / Other Developments

In February 2022, a submission consisting of an Environmental Report (Planning Ref. ABP-315838-23) was submitted to ABP for an emergency generation development project in accordance with the Development (Emergency Electricity Generation) Act 2022 (the 2022 Act), and in line with the conditions in the Minister for the Environment, Climate and Communications’ decision to approve the designated development (the TEG Plant), for a 150MW OCGT plant on a south-western portion of the SSE Tarbert 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.

An application has been submitted by EirGrid (Planning Ref 23350) for works covering an area of approximately 6.9ha on lands within the SSE Tarbert site. These proposed works will consist of removal of existing cable and the addition of two new lengths of 220kv underground cabling approximately 340m



in length to connect into the existing ESB substation. The works, if consented, will be within a section of the Proposed Development Site.

In 2018 an application was submitted by SSE Renewables (Ireland Limited) for the construction of a battery storage facility within the SSE Tarbert site (Planning Ref. 18932), this application was granted a 10-year planning permission. The project will consist of 50 self-contained battery container units and associated colling units, step up transformers and a control building. The project is to be located on the lands which are currently being used for the TEG project, therefore the project may be constructed once the TEG plant has been decommissioned and dismantled in approximately 2028/2029.

#### **1.4.4.1 Timescales**

For the purposes of the assessment, it is expected that the construction period for the Proposed Development will be 29 months.

With regard to the operational phase, it is envisaged that the Proposed Development will have a design life of 25 years. For the purpose of the environmental assessment, the lifetime of the Proposed Development is estimated as 25 years post commissioning and this is based on the design life of the equipment proposed. The operational requirements of the Proposed Development will inevitably change during its design life, and it will be subject to regular reviews to identify potential modifications and amendments that would allow the asset to have a future sustainable use beyond 25 years. Any replacement of major components for modifications and amendments will be subject to the necessary planning restrictions at the time they are intended to be carried out.

At the end of the design life, the Proposed Development would either be decommissioned, or the lifetime could potentially be extended subject to compliance with the necessary planning requirements for amendment, modification and / or operation, as applicable.

#### **1.4.4.2 Indication of Difficulties Encountered**

There were no significant difficulties encountered during the preparation of this EIAR, however where difficulties were encountered for the specialist EIAR chapters, they have been identified and discussed in their relevant chapters.

## **1.5 Structure of this EIAR**

The EIAR has been prepared to satisfy the requirements of Schedule 6 of the EIA Regulations – ‘Information to be contained in EIAR’.

The format of the EIAR reflects that proposed at the EIAR scoping stage and covers the assessment topics agreed through the EIA scoping process.

The EIAR must contain the information specified in Article 5(1) and (2) and Annex IV of the EIA Directive. It must also include any additional information specified in Schedule 6 of the Planning and Development Regulations 2001 (as amended) which is relevant to the specific characteristics of the development or type of development and to the environmental features likely to be significantly affected.

Table 1.2 signposts where the relevant information required to satisfy the Regulations is presented within this EIAR.

**Table 1.2: EIA Directive 2014/52/EU and EPA Guidelines (2022): Information for Inclusion in EIAR**

REFERENCE	EIAR CHAPTER WHERE REQUIRED INFORMATION IS PRESENTED
<b>Directive 2014/52/EU Article 3</b>	
<i>(1) The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors:</i>	
<i>(1)(a) Population and human health</i>	EIAR Chapter 15: Population and Human Health
<i>(1)(b) Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC</i>	EIAR Chapter 9: Biodiversity
<i>(1)(c) Land, soil, water, air and climate</i>	EIAR Chapters: <ul style="list-style-type: none"> <li>• 13: Land and Soils</li> <li>• 12: Water Environment</li> <li>• 7: Air Quality</li> <li>• 17: Climate</li> </ul>
<i>(1)(d) Material assets, cultural heritage and the landscape</i>	EIAR Chapters: <ul style="list-style-type: none"> <li>• 16: Material Assets</li> <li>• 8: Cultural Heritage</li> <li>• 10: Landscape and Visual</li> </ul>
<i>(1)(e) The interaction between the factors referred to in points (a) to (d)</i>	EIAR Chapters 7 – 19, within the Cumulative Effects Section of each Chapter, and Chapter 20: Interactions
<i>(2) The effects referred to in paragraph 1 on the factors set out therein shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned.</i>	EIAR Chapter 19: Major Accidents and Disasters
<b>Directive 2014/52/EU Article 5</b>	
<i>(3) Where an environmental impact assessment is required, the developer shall prepare and submit an environmental impact assessment report. The information to be provided by the developer shall include at least:</i>	
<i>(3)(a) A description of the project comprising information on the site, design, size and other relevant features of the project</i>	EIAR Chapters 1 - 5
<i>(3)(b) A description of the likely significant effects of the project on the environment</i>	EIAR Chapters 7 - 19
<i>3(c) A description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment</i>	EIAR Chapter 5: Proposed Development and Chapters 7 – 19
<i>3(d) A description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment</i>	EIAR Chapter 3: Need and Alternatives
<i>3(e) A non-technical summary of the information referred to in points (a) to (d)</i>	NTS provided as a standalone document

REFERENCE	EIAR CHAPTER WHERE REQUIRED INFORMATION IS PRESENTED
<i>3(f) Any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.</i>	See following rows.
Directive 2014/52/EU Annex IV	
<i>(1) A description of the project, including in particular:</i>	
<i>(1) (a) A description of the location of the project</i>	EIAR Chapter 4: Existing Site and Conditions
<i>(1) (b) A description of the physical characteristics of the whole project, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases</i>	EIAR Chapter 5: Proposed Development
<i>(1) (c) A description of the main characteristics of the operational phase of the project (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used</i>	EIAR Chapter 5: Proposed Development
<i>(1) (d) An estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases</i>	EIAR Chapter 5: Proposed Development and Chapters 7 – 19
<i>(5) A description of the likely significant effects of the project on the environment resulting from, inter alia:</i>	
<i>(5)(a) the construction and existence of the project, including, where relevant, demolition work</i>	EIAR Chapters 7 – 19
<i>(5)(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;</i>	EIAR Chapter 5: Proposed Development and Chapters: <ul style="list-style-type: none"> <li>• 9: Biodiversity</li> <li>• 12: Water Environment</li> <li>• 13: Land and Soils</li> </ul>
<i>(5)(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste</i>	EIAR Chapters 7 – 19
<i>(5)(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters)</i>	EIAR Chapters 7 – 19
<i>(5)(e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources</i>	EIAR Chapters 7 – 19 Chapter 20: Cumulative Effects
<i>(5)(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change</i>	EIAR Chapter 17: Climate
<i>(5)(g) the technologies and the substances used</i>	EIAR Chapter 5: Proposed Development

REFERENCE	EIAR CHAPTER WHERE REQUIRED INFORMATION IS PRESENTED
EPA Guidelines (2022) Section 3.5.5 (The Operation of the Project)	
<i>This is one of the most important sections of an EIAR. While accurate descriptions are vital to ensure credibility, not all of these topics will be relevant to many projects, particularly smaller scale ones:</i>	
<i>principal processes or activities, the scope of the project, the operations described in general terms, processes, regular activities, occasional activities, occupants, materials used</i>	EIAR Chapter 5: Proposed Development
<i>natural resources used (including energy and materials)</i>	EIAR Chapter 5: Proposed Development and Chapters: <ul style="list-style-type: none"> <li>• 9: Biodiversity</li> <li>• 12: Water Environment</li> <li>• 13: Land and Soils</li> </ul>
<i>residues and emissions</i>	EIAR Chapter 5: Proposed Development and Chapters: <ul style="list-style-type: none"> <li>• 7: Air Quality</li> <li>• 11: Noise and Vibration</li> <li>• 12: Water Environment</li> <li>• 13: Land and Soils</li> <li>• 16: Material Assets</li> <li>• 18: Waste Management</li> </ul>
<i>waste management</i>	EIAR Chapter 18: Waste Management
<i>secondary processes/activities</i>	EIAR Chapter 5: Proposed Development

This EIAR is presented as three volumes:

- Volume I – Environmental Impact Assessment Report (Main Text).
- Volume II – Appendices; and
- Volume III – Figures.

This specific document is Volume I which contains the EIAR main text. A Non-Technical Summary (NTS) is also provided as a standalone document.

This Chapter of the EIAR provides an introduction to the assessment process and approach, in addition to outlining the structure of the resultant EIAR. Chapter 1 establishes how the legal requirements are fulfilled as well as setting out the assessment approach, including a general methodology for the environmental assessment. EIAR Chapter 2 provides information about the Planning Policy in relation to the Proposed Development. EIAR Chapter 3 provides information about the need for and reasonable alternatives to the Proposed Development. EIAR Chapter 4 provides a description of the existing Site and conditions while EIAR Chapter 5 discusses the Proposed Development. EIAR Chapter 6 summarises consultations regarding the Proposed Development and the EIAR process.

EIAR Chapters 7 to 19 of this EIAR provide specialist assessments of impact to environmental topics. These comprise:

- Chapter 7 Air Quality.

- Chapter 8 Cultural Heritage.
- Chapter 9 Biodiversity.
- Chapter 10 Landscape and Visual.
- Chapter 11 Noise and Vibration.
- Chapter 12 Water Environment.
- Chapter 13 Land and Soils.
- Chapter 14 Traffic and Transport.
- Chapter 15 Population and Human Health.
- Chapter 16 Material Assets.
- Chapter 17 Climate.
- Chapter 18 Waste Management; and
- Chapter 19 Major Accidents and Disasters.

Interactions are considered in EIAR Chapter 20, and a Summary and Conclusions is presented in EIAR Chapter 21.

In addition to the information provided in each of the chapters, there is also supporting information within EIAR Volume II – Appendices which is cross referenced as required. Figures are provided in EIAR Volume III – Figures.

### **1.5.1 The Assessment Team**

Details and a statement (a 'statement of competence') of the relevant expertise and qualifications of each of the contributors to the EIAR is required by EIA Regulations.

This assessment has been undertaken and the subsequent EIAR prepared by AECOM on behalf of the Applicant. In accordance with EIA Regulations, AECOM confirms that experts involved in the preparation of this EIAR are fully qualified and competent in their respective fields. Each expert has extensive proven expertise in the relevant field concerned, thus ensuring that the information provided herein is complete and of high quality.

Details of the assessment team (including a short biography for each team member) and relevant company, as well as their respective inputs to the EIAR is presented in Appendix 1B (refer to EIAR Volume II).

### **1.5.2 EIAR Review and Comment**

The Environmental Impact Assessment Report (Volume I, II and III including the Non-Technical Summary) will be available for inspection or purchase on a payment of the specified fee (which fee shall not exceed the reasonable cost of making such a copy) during office hours, for a period of at least seven weeks (from receipt of application) at the offices of An Bord Pleanála and Kerry County Council:

**Table 1.3: EIAR Review and Comment Locations**

<b>An Bord Pleanála</b>	<b>Kerry County Council</b>
64 Marlborough Street	County Buildings
Rotunda	Rathass
Dublin 1	Tralee
DO1 V902	Co. Kerry
Ireland	V92 H7VT

The prescribed information set out in Article 97B of the EIA Regulations (as substituted by Article 65 of S.I. No. 296/2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018) has been uploaded to EIA Portal in advance of submission.

## 1.6 References

Transport Infrastructure Ireland (TII) (2022) Air Quality Assessment of Specified Infrastructure Projects – Overarching Technical Development PE-ENV-01106 (tiipublications.ie)

Institute of Air Quality Management (2016) Guidance on the assessment of dust from demolition and construction Version 1.1 dated 01/06/16.

Institute of Air Quality Management (2017) Land-Use Planning & Development Control: Planning for Air Quality v1.2

Environmental Protection Agency (2020). Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)

Environmental Protection Agency (EPA) (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment Reports.

European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 S.I. No. 296/2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (irishstatutebook.ie)

EU EIA Directive 2011/92/EU: Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) (Text with EEA relevance) (legislation.gov.uk)

EIA Directive 2014/52/EU Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (Text with EEA relevance) (legislation.gov.uk)

