CONTENTS

TABLES

APPENDIX
(Refer to EIAR Volume II)

FIGURES
(Refer to EIAR Volume III)

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1.0 INTRODUCTION

1.1 Background

1.1.1 This Environmental Impact Assessment Report (EIAR) has been prepared by AECOM on behalf of EP Energy Developments Ltd. ('the Applicant') in relation to a planning application ('the Application') for an Open Cycle Gas Turbine (OCGT) plant, acoustic barriers, secondary fuel storage and unloading facility, distillate fuel gantry, water storage tanks, surface water drainage system, gas AGI, electrical substation connection and all associated ancillary development, site works and services ('the Proposed Development') on land within and to the north of Tynagh Power Station in Derryfrench, Loughrea, Co. Galway. This EIAR relates solely to the Proposed Development which is called Tynagh North, and is a separate and discrete application from other power related applications on and adjacent the Tynagh Power Station facility.

1.1.2 The Site is bordered to the east by the former Tynagh Mine complex and to the immediate south, by the existing Tynagh Power Station. Sperrin Galvanisers Ltd., an Integrated Pollution Prevention and Control (IPPC) licensed facility, is located adjacent to the south-western boundary of the Site (for details of the existing Site and Existing Conditions please refer to Chapter 4, EIAR Volume I).

1.1.3 This Environmental Impact Assessment Report (EIAR) presents:

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

1.1.4 This EIAR is provided in accordance with the EU EIA Directive 2011/92/EU, as amended by EIA Directive 2014/52/EU and the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, in order to inform the consideration of the Application and provide the planning authority with the environmental information that must be taken into account when determining the Application. All the land required for the Proposed Development (included within the Application site boundary – the Planning Application Red Line Boundary) is referred to in this EIAR as 'the Site'. The application area lies entirely within the administrative boundary of Galway County Council, and notice of the application has been served to Galway County Council accordingly.

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

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

- **'the Proposed Development'** – relates to the 1 no. Open Cycle Gas Turbine (OCGT) plant, acoustic barriers, secondary fuel storage and unloading facility, distillate fuel gantry, water storage tanks, surface water drainage system, gas AGI, electrical substation connection and all associated ancillary development, site works and services for which planning permission is being sought;
- **'the Site'** – relates to the area where the Proposed Development is located (the red line/ planning application boundary);

- '**the Power Station Site'** – relates to the built infrastructure of the existing Tynagh CCGT Power Station site (Planning Ref: 03/02943); and
- **'Approved Development Ref: 21/2192'** - relates to planning application Ref. 21/2192 (submitted as an application to Galway County Council in November 2021, subsequently appealed and approved by ABP under Ref. PL07.313538) – that is a separate 299MW OCGT development and project, primarily to the west of the existing Tynagh Power Station, to that of the Proposed Development which is for a 350MW facility to the north. Planning approval was obtained for the Approved Development Ref: 21/2192, however the Applicant is unable to implement it (i.e. will not build/operate the Approved Development Ref: 21/2192') for the foreseeable future due to a range of viability constraints. For robust EIA assessment purposes it is nonetheless assumed that the Approved Development may proceed, in amended form[1], at some point in the future. It is assumed in this EIAR that the construction phase of the Approved Development Ref: 21/2192 would be before or after the construction of the Proposed Development (i.e. not concurrent and the peak periods would not overlap), and that for the operational phase both the Approved Development Ref: 21/2192 (in amended form) and the Proposed Development may operate concurrently in the future.

1.1.7 Tynagh North OCGT would be accessed via the existing Tynagh Power Station to the south but would function independently of both it and the Approved Development Ref. 21/2192, with a separate diesel offloading and storage facility (required in the emergency event of an interruption to the gas supply at the same time as a high demand for electricity generation). Tynagh North OCGT would be capable of generating 350MW of electricity and, as with Approved Development Ref. 21/2192, would benefit from proximity to the existing gas and electrical grid infrastructure that serves Tynagh Power Station. The Proposed Development will have separate connections to this infrastructure, by way of a new Above Ground Installation (AGI) to connect to the existing high pressure gas pipeline to the west, and a new bay within the existing electricity substation to the south.

1.2 The Applicant

1.2.1 The applicant, EP Energy Developments Ltd., is a subsidiary of EP UK Investments Ltd. (EPUKI), which owns and operates a number of power stations in Ireland and the UK. These include the existing Tynagh CCGT Power Station (run by Tynagh Energy Limited, of which EPUKI hold a majority stake) in the Republic of Ireland, Kilroot Power Station and Ballylumford Power Station in Northern Ireland, Langage Power Station and South Humber Power Station, which are gas-fired power stations located near Plymouth and Immingham and Lynemouth Power Station, a biomass fuelled power plant in Northumberland. EPUKI also owns sites with consent for new power stations in Norfolk, North East Lincolnshire and North Yorkshire.

1.2.2 EPUKI is a subsidiary of Energetický A Prumyslový Holding ('EPH'). EPH owns and operates energy generation assets in the Czech Republic, Slovak Republic, Germany, Italy, Hungary, Poland, Republic of Ireland and the United Kingdom.

[1] Maintaining the OCGT Plant, AGI and Fuel Tanks as approved, but amending the form and layout of the northern part of the site (Workshop, Stores, Administration Building).

1.3 The Proposed Development

1.3.1 The Proposed Development consists of a 350MW gas turbine operating in open cycle gas turbine (OCGT) mode primarily fuelled by natural gas, acoustic barriers, secondary fuel storage and unloading area, water storage tanks, surface water drainage system, gas AGI, electrical substation connection and all associated ancillary development, site works and services.

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

1.3.3 In addition to exceeding the electrical efficiency requirements specified by Best Available Techniques published for the energy sector, a natural gas fired OCGT produces the least NOx emissions of the power generating technologies available (European Commission (2017), Best Available Techniques (BAT) Reference Document for Large Combustion Plants, Publications Office of the European Union, 2017).

1.3.4 The Proposed Development will comprise of the following main components (full details of the Proposed Development components are provided in EIAR Chapter 5):

- Open Cycle Gas Turbine (OCGT) unit, 40m emissions stack and balance of plant;
- Acoustic barriers;
- Secondary fuel storage and unloading facility;
- Distillate fuel gantry;
- Water Storage Tanks;
- Gas AGI and electrical substation connection; and
- Surface Water Drainage system.

1.3.5 Details of the alternatives considered, and how the Proposed Development layout was selected, are presented in Chapter 3: Need and Alternatives of this EIAR.

Site Area

1.3.6 The Proposed Development is situated in Derryfrench, Loughrea, Co. Galway, Ireland (Irish Grid Reference X: 174450; Y: 213165). The entire Site is located within the administrative area of GCC.

1.3.7 The Site on which the Proposed Development will be located is on brownfield land to the immediate north of the existing Tynagh Power Station Site. The area available for the Proposed Development (the 'red line' planning application area) is 8.3 hectares.

1.3.8 A full description of the Site is set out in Chapter 4: Existing Site and Conditions of this EIAR and the Proposed Development is described in more detail in Chapter 5: The Proposed Development of this EIAR (EIAR Volume I).

Site History

1.3.9 The Tynagh mines opened in the 1960s and were an important source of lead and zinc concentrates. From 1965 to 1981 the mines were managed by the Northgate Group subsidiary Irish Base Metals Ltd. For almost twenty years Irish Base Metals Ltd was a major source of employment for east Galway and the mines were worked on an opencast

and underground basis until closure in the early 1980s, after which a period of partial restoration and site rehabilitation was undertaken.

1.3.10 In 2003 planning consent (Ref: 03/2943) was granted (following submission of an Environmental Impact Statement – April 2003) for a 400MW CCGT to be located on the western portion of the former mine site (west of the tailing pond and north of the mine lagoon). In addition to the CCGT generating plant, planning consent was also secured in 2004 for a high pressure buried gas pipeline supplying fuel to the power station, and for a 220kV overhead line to connect the power station to the National Grid at Oldstreet, 8km to the south-east of the site.

1.3.11 In November 2021, a planning application and EIAR were submitted to GCC for a separate development project, a 299MW OCGT plant on the western portion of the existing Tynagh Power Station site. Approved Development Ref: 21/2192 proposes to demolish the existing Tynagh Power Station site workshop, administration building and car park, relocate these items to the brownfield lands to the immediate north of the Tynagh Power Station facility and develop a separate OCGT plant on the western part of the Power Station Site. While planning approval has been obtained for the Approved Development Ref: 21/2192 the Applicant is unable to implement it (i.e. will not build/operate the approved plant) for the foreseeable future due to a range of viability constraints. For robust EIA assessment purposes it is nonetheless assumed that the Approved Development may proceed, in amended form, at some point in the future.

1.3.12 For further details of the Approved Development please refer to EIAR Chapter 4, EIAR Volume I.

1.3.13 The Site Location (the red line boundary) is shown in Figure 1.1 and the Site Setting on Figure 4.1. Within the wider area, the Site is surrounded by the following features:

- Within– Former mine brownfield, disused galvanised shed, electricity pylon, existing gas AGI, electrical substation, Tynagh Power Station and existing woodland;
- North-west – Existing woodland (0m) and residential properties with outbuildings (440m);
- North-east – Milchem Equestrian Centre (330m);
- East – Mine tailing pond (40m);
- West – LP4310 Gurtymadden (note - some public documents refer to this road as ‘Gortymadden’) to Tynagh Road (300m) and residential property west of LP4310 (330m);
- South-west – Industrial buildings of Sperrin Galvanisers (100m) and residential properties at Derryfench (420m);and
- South – Tynagh Power Station (0m), Mine lagoon (280m), residential property (700m), industrial buildings (1.4km), and village of Tynagh (1.8km).

1.3.14 The Site is accessed through the existing power station facility from the LP4310 Gurtymadden to Tynagh Road which joins with the N65 Loughrea to Portumna Road approximately 4km north of the Site at Gurtymadden crossroads. To the south of the Site, the Gurtymadden to Tynagh Road junctions with the Loughrea to Tynagh Road at Lisheen.

1.4 Environmental Impact Assessment Report (EIAR)

Legal basis for the Environmental Impact Assessment Report

1.4.1 The EIAR complies with the requirements of the EU EIA Directive 2011/92/EU, as amended by EIA Directive 2014/52/EU and Part X of the Planning and Development Act 2000 and Part 10 of the Planning and Development Regulations 2001, as amended by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018.

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

'*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.'

1.4.3 The classes of development where an EIA is mandatory are set down in Regulations made pursuant to Section 176 of the Planning and Development Act 2000. In addition, Schedule 5 sets out thresholds for projects, and if that threshold is 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 meet 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.

1.4.4 The Proposed Development, which includes a 350MW open cycle gas turbine plant, falls within the descriptions of development in the Planning and Development Regulations, 2001, Schedule 5, Development for the purposes of Part 10, as per below:

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

1.4.5 An EIA for the Proposed Development is therefore mandatory. A Pre-Application SID consultation was held with ABP on the 18 January 2023 and the scope and format of the EIAR was presented.

1.4.6 It was presented to ABP that the Applicant would be submitting an Environmental Impact Assessment Report (EIAR) with the planning application, as required for SID. By correspondence dated 11 May, ABP confirmed that the Proposed Development constitutes strategic infrastructure within the meaning of section 37A of the Planning and Development Act, 2000 (As amended)[2].

Environmental Impact Assessment (EIA) Approach

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

1.4.8 The EIAR requirements for consultation are defined in the EIA Directive (85/337/EEC) as amended in 2011 Directive 2011/92/EU and 2014 Directive 2014/52/EU under Article 6. 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.

1.4.9 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 environmental management.

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

- Review – compiling relevant background data and identifying issues and constraints;
- Baseline Surveys – 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 – predicting the likely environmental impacts of the scheme during construction, operation (including maintenance) and decommissioning, and evaluating the significance of the effect of such impacts;
- Determine Mitigation Measures to form part of the final design of the scheme;

[2] Note: The red line boundary of the Proposed Development has been amended since the ABP Determination was issued, to provide for a revised gas AGI location and connection to the existing electricity substation.

- Assessment of Residual Environmental Effects and their Significance; and
- Assessment of Cumulative Environmental Effects and Inter-relationships.

1.4.11 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.

1.4.12 During and following this evaluation, mitigation measures have been developed to avoid, reduce, or remediate the impacts.

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

1.4.14 An explanation of the approach to undertaking the assessment and producing the EIAR is set out in section 1.5. In summary, this EIAR has compiled, evaluated, and presented the significant environmental effects of the Proposed Development. The assessment is designed to help produce, as far as possible, an environmentally sympathetic project by detecting likely significant adverse effects, thus leading to the identification and incorporation of appropriate mitigation measures into the development design. 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 development through baseline studies;
- Predict the possible effects on the environment, both beneficial and adverse, of the 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.

Project Scoping and Review

1.4.15 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.

1.4.16 For this Proposed Development, AECOM have undertaken a Scoping Review (see Appendix 1A, EIAR Volume II). The Scoping Review has been prepared by the EIA technical teams to enable the scope of the assessment to be defined. A formal request for scoping under s.37D of the PDA 2000 was not made.

Pre-Application Discussions

1.4.17 The Pre-Application process included discussions An Bord Pleanála as the Planning Authority and further details of this are provided within EIAR Chapter 6: Consultation.

Consultations

1.4.18 Wider community consultations have not been undertaken prior to the submission of this EIAR, however lands in the immediate vicinity of the Proposed Development Site have been the subject of a planning application for separate power related development in recent years, which has included the submission of an EIAR. In the preparation of this EIAR, cognisance has been undertaken of relevant formal consultation, consultee responses and third-party comments in relation to that separate project.

1.4.19 The required Prescribed Bodies have been notified of the application in advance of submission, in accordance with the SID Determination issued by An Bord Pleanála.

1.5 The Assessment Approach & Methods

1.5.1 The assessment of impacts has been conducted with reference to the following general approach. The specific methodology adopted for each assessment is contained in the individual technical chapters. Likely significant impacts 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. In general, the significance of an effect has been defined using a combination of the sensitivity (e.g., high, medium, and low) of the environmental receptor and the magnitude of impact (e.g., major, moderate, slight, and negligible). 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 here. 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.

Assessment Methodology

1.5.2 In order to ensure the EIAR is robust in considering the likely significant effects of the Proposed Development while taking into account 'other developments', appropriate assessment scenarios have been identified and are discussed below.

1.5.3 While planning approval has been obtained for the Approved Development Ref: 21/2192, the Applicant is unable to implement it (i.e. will not build/operate the approved plant) for the foreseeable future due to a range of viability constraints. For robust EIA assessment purposes it is nonetheless assumed that the Approved Development may proceed, in amended form[3], at some point in the future. It is assumed in this EIAR that the construction phase of the Approved Development Ref: 21/2192 would be before or after the construction of the Proposed Development (i.e. not concurrent and the peak periods would not overlap), and that for the operational phase both the Approved Development Ref: 21/2192 (in amended form) and the Proposed Development may operate concurrently in the future.

1.5.4 As such, to ensure the Approved Development Ref: 21/2192' is adequately considered cumulatively in the EIAR, a 'future baseline' scenario is assessed where appropriate rather than an existing baseline scenario.

1.5.5 The EIAR assesses a set of scenarios, and where EIA topics need to deviate from this to present a reasonable worst-case assessment this will be noted in the specific topic chapter. The assessment scenarios are:

- **Existing baseline scenario** – Based on current baseline which includes the existing operational Tynagh Power Station CCGT;

[3] Maintaining the OCGT Plant, AGI and Fuel Tanks as approved, but amending the form and layout of the northern part of the site (Workshop, Stores, Administration Building).

- **Future baseline scenario** – A future date which includes the existing baseline (i.e. including the operational Tynagh Power Station CCGT) + the operational Approved Development Ref: 21/2192;
- **Construction phase scenario** – The assessment of the Proposed Development construction phase, which is expected to last 18-24 months duration and consideration and assessment of any overlap with construction of the Approved Development Ref: 21/2192 OCGT;
- **Operational scenario** – The assessment of the operational Proposed Development against future baseline scenario (i.e. the assessment will include the existing operational Tynagh Power Station CCGT + the operational Approved Development Ref: 21/2192 299MW OCGT + the operational Proposed Development 350MW OCGT); and
- **Decommissioning scenario** – Assessment of the decommissioning of the Proposed Development at the end of its operational life.

Sensitivity (or Value)

1.5.6 Sensitivity has generally been defined according to the relative value or importance of the feature, i.e., whether it is of international, national, regional or local importance; by the sensitivity of the receptor in the case of the air quality and noise assessments; or by susceptibility or vulnerability to change in the case of landscape and visual aspects. Typical criteria for assessing the sensitivity of an environmental receptor are listed in Table 1.1. It should be noted that there are variations in how sensitivity is assessed depending on whether existing guidelines exist. Within this document, an example of this is the Cultural Heritage chapter, which uses a framework of sensitivity depending on the site designation.

Table 1.1: Environmental Sensitivity and Typical Descriptions

VALUE (SENSITIVITY)	TYPICAL DESCRIPTORS
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 (or lower)	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Magnitude

1.5.7 Description and criteria for defining magnitude of an impact are listed in Table 1.2. Each of the environmental topics have applied these descriptors where possible. Additional guidance and recommendations have also been used to be more specific to classify impacts. These are detailed within Chapters 7-18 of this EIAR.

Table 1.2: Magnitude of Impact and Typical 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 (Beneficial).
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 (Beneficial).
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 beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
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 (Beneficial).
No change	No loss or alteration of characteristics, features or elements, no observable impact in either direction.

Significance Categories

1.5.8 Table 1.3 shows how the interaction between sensitivity and magnitude results in the significance of an environmental effect.

Table 1.3: Example 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 or Slight	Neutral or Slight	Slight

1.5.9 Table 1.4 provides an example of the significance categories in which an effect arising from the Proposed Development could be categorised. It should be noted that not all of the environmental topics have used all of the following categories as outlined in Table 1.4. Additionally, EIAR Chapter 7: Air Quality and Climate describes effects as significant or not significant based on the effect descriptors applied with consideration of professional judgment. This is the approach recommended by Air Quality industry standard guidance relevant to the assessment of construction dust effects (IAQM 2016), road transport effects (TII, 2011) and combustion emissions effects (IAQM 2017 and EPA).

Table 1.4: Significance Categories

SIGNIFICANCE CATEGORY	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 but are important in enhancing the subsequent design of the project.
Not Significant	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Cumulative Impacts / Other Developments

1.5.10 In November 2021, a planning application and EIAR were submitted to GCC for a separate development project, an 299MW OCGT plant on the western portion of the existing Tynagh Power Station site. Approved Development Ref: 21/2192 proposes to demolish the existing Tynagh Power Station site workshop, administration building and car park, relocate these items to the brownfield lands to the immediate north of the Tynagh Power Station facility and develop an OCGT plant on the western part of the Power Station Site.

1.5.11 While planning approval has been obtained for the Approved Development Ref: 21/2192, the Applicant is unable to implement it (i.e. will not build/operate the approved plant) for the foreseeable future due to a range of viability constraints. For robust EIA assessment purposes it is nonetheless assumed that the Approved Development may proceed, in amended form, at some point in the future.

1.5.12 Tynagh North OCGT would be accessed via the existing Tynagh Power Station to the south but would function independently of both it and (in the event that the consent was implemented) the Approved Development Ref. 21/2192, with a separate diesel offloading and storage facility (required in the emergency event of an interruption to the gas supply at the same time as a high demand for electricity generation).

Timescales

1.5.13 For the purposes of the assessment, it is considered that the construction period for the Proposed Development would be 18-24 months.

1.5.14 With regard to the operational phase, it is envisaged that the Proposed Development will have a design life of at least 25 years. For the purpose of the environmental assessment, the lifetime of the Proposed Development is estimated as 25 years 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.

1.5.15 It is assumed in this EIAR that the construction phase of the Approved Development Ref: 21/2192 would be before or after the construction of the Proposed Development (i.e. not concurrent and the construction phase peak periods would not overlap), and that for the operational phase both the Approved Development Ref: 21/2192 (in amended form) and the Proposed Development may operate concurrently in the future.

1.5.16 At the end of the design life, the Proposed Development would either be decommissioned, or the lifetime could potentially be extended. Decommissioning or extension of the lifetime of the asset would therefore be expected to commence at some point after 2052.

Indication of Difficulties Encountered

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

1.6 Structure of this EIAR

1.6.1 The EIAR has been prepared to satisfy the requirements of Schedule 6 of the EIA regulations – 'Information to be contained in EIAR'.

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

1.6.3 The EIAR must contain the information specified in 1(2)(g) of the Directive & Sn 171A of the Act. It must also include any additional information specified in Schedule 6 to the 2018 Regulations which is relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

1.6.4 Table 1.5 signposts where the relevant information required to satisfy the Regulations is presented within this EIAR.

Table 1.5: EIA Regulations - Schedule 6: Information for Inclusion in EIAR

EIA REGULATIONS - SCHEDULE 6: INFORMATION TO BE CONTAINED IN EIAR	EIAR CHAPTER WHERE REQUIRED INFORMATION IS PRESENTED
A description of the proposed development comprising information on the site, design, size, and other relevant features of the proposed development.	EIAR Chapter 5: The Proposed Development.
A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment.	EIAR Chapter 3: Need and Alternatives
A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without the development as far as natural changes from the baseline scenario can be assessed with reasonable	Included within EIAR chapters 7-18.

EIA REGULATIONS - SCHEDULE 6: INFORMATION TO BE CONTAINED IN EIAR	EIAR CHAPTER WHERE REQUIRED INFORMATION IS PRESENTED
effort on the basis of the availability of environmental information and scientific knowledge.	
A description of the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment' in section 171A of the Act likely to be significantly affected by the proposed development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air , climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	Included within EIAR chapters 7-18.
A description of the likely significant effects on the environment of the proposed development.	Included within EIAR chapters 7-18 and EIAR Chapter 20: Conclusions.
A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	Included within EIAR Chapter 1: Introduction and EIAR chapters 7-18.
A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of an analysis after completion of the development), explaining the extent to which significant adverse effects on the environment are avoided, prevented, reduced or offset during both the construction and operational phases of the development.	Included within EIAR chapters 7-18 and EIAR Chapter 20: Conclusions.
A description of the expected significant adverse effects on the environment of the proposed development driving from its vulnerability to risks of major accidents and/or disasters which are relevant to it. Relevant information available and obtained through risk assessments pursuant to European Union legislation such as Seveso III Directive or the Nuclear Safety Directive or relevant assessments carried out pursuant to national legislation may be used for this purpose, provided that the requirements of the Environmental Impact Assessment Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for, and proposed response to, emergencies arising from such events.	Included in EIAR Chapter 18.
A non-technical summary of the information provided.	Included as a stand-alone document.
A reference list detailing the sources used for the descriptions and assessments included in the report.	Included within each chapter.

1.6.5 This EIAR is presented as three volumes:

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

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

1.6.7 Chapter 1 of the Environmental Impact Assessment Report (this chapter), provides an introduction to the assessment process and approach, in addition to outlining the structure of the resultant EIAR. This chapter 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.

1.6.8 EIAR Chapters 7 to 18 of this EIAR provide specialist assessments of impact to particular environmental topics. These comprise:

- Chapter 7 Air Quality and Climate;
- Chapter 8 Cultural Heritage and Archaeology;
- Chapter 9 Biodiversity;
- Chapter 10 Landscape and Visual Effects;
- Chapter 11 Noise and Vibration;
- Chapter 12 Water Environment;
- Chapter 13 Soils and Geology;
- Chapter 14 Traffic;
- Chapter 15 Land Use;
- Chapter 16 Population and Human Health;
- Chapter 17 Material Assets; and
- Chapter 18 Major Accidents and Disasters.

1.6.9 Interrelationships and Cumulative Effects (both Cumulative Effects and Combined Effects) are considered in EIAR Chapter 19 and a Summary and Conclusions is presented in EIAR Chapter 20.

1.6.10 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.

1.7 The Assessment Team

1.7.1 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.

1.7.2 This assessment has been undertaken and the subsequent EIAR prepared by AECOM on behalf of EP Energy Developments Ltd. 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.

1.7.3 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).

1.8 EIAR Review and Comment

1.8.1 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 a 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 submission of application) at the offices of An Bord Pleanála and Galway County Council:

An Bord Pleanála, 64 Marlborough Street, Dublin 1, D01 V902	**Galway County Council** Planning Office County Hall Prospect Hill Galway

1.8.2 The prescribed information set out in Article 97B of the 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.

1.9 References

Transport Infrastructure Ireland (formerly National Roads Authority) (2011). Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes

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)

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)