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**Environmental Impact  
Assessment Report  
(EIAR) Volume 1 - Non  
Technical Summary  
(NTS)**

Bord Gáis Energy Ltd.

February 2026

# CASHLA PEAKER PLANT

# Notice

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# Acronyms

Acronym	Definition
ACA	Architectural Conservation Area
ACP	An Coimisiún Pleanála
AGI	Above Ground Installation
AIA	Archaeological Impact Assessment
bgl	Below ground-level
BOCCI	Birds of Conservation Concern Ireland
BGE	Bord Gáis Energy Limited
ca	circa
C&D	Construction and Demolition
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association
CAP	Climate Action Plan
CH	Cultural Heritage
CO <sub>2</sub>	Carbon Dioxide
CO	Carbon Monoxide
COMAH	Control of Major Accident Hazards
CRU	Commission for Regulation of Utilities
cSAC	Candidate SAC
CSO	Central Statistics Office
CTMP	Construction Traffic Management Plan
dB	Decibels
EC	European Commission
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMF	Electromagnetic Field
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
EU	European Union
EV	Electric Vehicle
EWC	European Waste Catalogue
EAL	Exceptional Abnormal Load
FWD	Falling Weight Deflectometer
GCC	Galway County Council
GNI	Gas Networks Ireland
GHG	Greenhouse Gas
GSI	Geological Survey of Ireland
GW	Gigawatt
GWB/s	Groundwater Body/ies
GWDTE	Groundwater dependent terrestrial Ecosystem
HGV/s	Heavy-goods vehicle/s
HVO	Hydrotreated Vegetable Oil
IAS	Invasive Alien Species
IED	Industrial Emissions Directive
IEEE	Institute of Electrical and Electronic Engineers
IGI	Institute of Geologists Ireland



IPPC	Integrated Pollution Prevention and Control
km	Kilometres
km/h	Kilometres per hour
kV	Kilovolt
LVIA	Landscape Visual and Impact Assessment
LoW	List of Waste
MA&D	Major accidents hazards and disasters
m <sup>3</sup>	Cubic metres
m	Metres
mT CO <sub>2</sub> e	Metric Tonnes of Carbon Dioxide Equivalent
MV	Medium Voltage
MW	Megawatts
NBDC	National Biodiversity Data Centre
NDP	National Development Plan
NECP	National Energy and Climate Plan
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NO <sub>2</sub>	Nitrogen dioxide
NO <sub>x</sub>	Mixture of nitric oxide (NO) and nitrogen dioxide (NO <sub>2</sub> )
NPF	National Planning Framework
NPO	National Policy Objective
NPWS	National Parks and Wildlife Services
NRA	National Roads Authority
NTS	Non-technical summary
OHL	Overhead Line
OPW	Office of Public Works
OCTG	Open Cycle Gas Turbine
OSI	Ordnance Survey Ireland
PMS	Pavement Management Services Ltd
PM	Particulate Matter (particle size in μ)
pcu	Passenger car units
pNHA	proposed Natural Heritage Area
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns
PM <sub>10</sub>	Particulate matter less than 10 microns
PSCS	Project Supervisor Construction Stage
PSDP	Project Supervisor for the Design Process
pSPA	Potential SPA
QI	Qualifying Interest
RMP	Record of Monuments and Places
RPO	Regional Policy Objectives
RPS	Record of Protected Structures
RWMP	Resource Waste Management Plan
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SI	Statutory Institute
SMRs	Sites and Monument Record
SPA	Special Protection Area
SuDS	Sustainable urban Drainage Systems
SO <sub>2</sub>	Sulphur dioxide
TÉ	Tailte Éireann
TII	Transport Infrastructure Ireland
TPO	Tree Preservation Order



TSO	Transmission System Operator
UGC	Underground Cable
µg	Microgrammes
WFD	Water Framework Directive
ZoI	Zone of Influence
ZoN	Zone of Notification



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# 1. Introduction & Methodology

Bord Gáis Energy Limited (the applicant) is seeking a 10 year planning permission from An Coimisiún Pleanála (ACP) for the development of a gas fired power plant, the Proposed Project, described below, on a 19.17 hectare site, located in County Galway.

The Proposed Project includes a gas fired power plant (named Cashla Peaker Plant), as well as the construction of an ESB substation compound within the Peaker Plant site, and associated infrastructure, the construction of approximately 8.1 kilometres (km) of an underground grid connection route and laying of cable from the proposed ESB Substation (in the Cashla Peaker Plant Site) to the Cashla 220 kV Substation, along the L7109, L71093, L7108 and L3103 roads. The Proposed Project boundary is presented in Figure 1-1.

The proposed Cashla Peaker Plant (herein referred to as the Peaker Plant) is in a greenfield site located in Pollnagroagh, Athenry, ca. 18 km east of Galway City and ca. 2 km west of Athenry. The Proposed Peaker Plant Site is positioned between the northern and eastern arms of the M6/M18 interchange (Refer to Figure 1-1). The Proposed Peaker Plant Site is agricultural in nature and generally surrounded by agricultural lands, with the M18 motorway bounding the west of the Site, and agricultural lands to the north, east and south of the Site, with the M6 motorway slightly further south. Access to the Site will be provided via a newly proposed ca. 1.15 km long access road connecting to the L3103, ca. 1 km east of the M17 motorway. The Site is close to an existing gas transmission pipeline, as well as the existing Cashla 220 kV electricity substation. Sporadic rural houses and agricultural properties are located within the vicinity of the proposed access point off the L3103.

Ireland is undergoing a rapid transition to a low-carbon electricity system, with increasing deployment of renewable energy technologies such as wind and solar. While these resources are central to achieving binding climate targets, their output is variable and is not always sufficient to meet electricity demand. Maintaining a reliable, secure supply therefore requires flexible generation capable of responding quickly when renewable output is insufficient.

The proposed Peaker Plant plays a critical role in this context. Rather than competing with renewable energy, it functions as an enabler of the net zero transition, providing fast-response capacity that facilitates renewable generation to be safely connected to the grid. By bridging periods of low renewable output, the facility ensures grid stability and prevents supply shortfalls, supporting the integration of renewable generation, and storage technologies.

Within national policy documents, the need for flexible gas generation is recognised as a key part of the energy transition to net zero and for the purposes of energy security. The most recent Climate Action Plan (CAP 25) includes the delivery of at least 2 Gigawatts (GW) of New Flexible Gas Plant by 2030 as a national target alongside other renewable energy generation targets, recognising the role that flexible gas plants have to play in supporting a flexible and resilient electricity system. The Proposed Peaker Plant will help bridge this gap. The flexible nature of the plant means it can be turned on and off to react to fluctuations in renewable generation, by ramping up quickly to meet peak demand. The Cashla Peaker Plant is selected as open cycle as this configuration provides a much quicker response time to start up and begin generation. This fast response time is required to meet the rapid changes in the transmission grid electrical supply and demand imbalance. In terms of efficiency the combined cycle gas turbine is better and therefore once operating at maximum load will produce less emissions per megawatt (MW).

The Proposed Project is in line with the National Development Plan (NDP) 2021-2030, and the Government's 'Policy Statement on Security of Electricity Supply'. The site location is close to an existing gas transmission pipeline, as well as the existing Cashla 220 kilovolt (kV) electricity substation.



The benefits of the Proposed Project are summarised as follows:

- **Grid Stability and Security of Supply:** providing quick start power to react to peaks in demand, ensuring grid stability and security of supply;
- **Flexibility:** the new plant can be switched on or off to balance the grid when demand is high, or generation is low;
- **Supports Ireland's Energy Transition:** the new plant will act as a bridge technology ensuring a stable transition to more renewable generation without compromising reliability; and,
- **Economic Benefits:** generates employment during construction and also attracts investment through the provision of a secure and reliable grid.

The need for this project is further discussed in the planning statement submitted as part of this planning application, Volume 2 of the EIAR (Main EIAR document), and in the MHC letter provided in Appendix 1-2, Volume 3 of the EIAR.

The Proposed Project provides for a Gas-Powered Peaker Plant and associated infrastructure at Pollnagroagh / Rathmorrissy, Athenry, Co. Galway (Figure 1-1), which comprises four main elements: the Peaker Plant, Gas Networks Ireland (GNI) above-ground installation and gas pipeline, Electricity Supply Board (ESB) substation, and underground grid connection.

Due to the nature of the Proposed Project, a description of the key components of the Proposed Project is provided here for ease of understanding. For the purposes of clarity, all components of the Proposed Project as a whole, have been assessed within the EIAR.

There are 2no. consenting processes for the Proposed Project. Elements of the Proposed Project (i.e. the Peaker Plant, above-ground installation, and electricity transmission infrastructure (substation and underground grid connection)) constitute strategic infrastructure development (SID) under the Planning and Development Act 2000, as amended. Different provisions of the Act apply depending on the type of SID:

- the Peaker Plant and above-ground installation will be the subject of a section 37E planning application via BGE (Standard SID development is applied directly to An Coimisiún Pleanála under section 37E of the Act), and
- the substation and underground grid connection will be the subject of a separate section 182B planning application also by BGE (SID comprising electricity transmission infrastructure must be applied for under section 182B, as provided in section 182A of the Act).

The Gas Network Ireland (GNI) 146 Rathmorrissy Gas Pipeline will be subject to a separate Section 39A consent process via GNI.

For the purposes of this Environmental Impact Assessment (EIA), the Proposed Project has been assessed as a single, combined project. A single Environmental Impact Assessment Report (EIAR) has therefore been prepared to assess the environmental effects of the overall project. The Proposed Project (hereafter referred to as 'the Site' or the 'Proposed Project') comprises the Peaker Plant, Gas Networks Ireland (GNI) above-ground installation and gas pipeline, Electricity Supply Board (ESB) substation, and underground grid connection.

As part of the application for permission, both an Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been prepared for the Proposed Project, and will be submitted with both planning applications (namely Section 37E SID application and Section 182B SID application). These reports assess and



outline the potential environmental effects of the Proposed Project and ensure it aligns with EU regulations for environmental protection.

This non-technical summary (NTS) of the Environmental Impact Assessment Report (EIAR) presents a standalone overview of the Proposed Project and an assessment of all associated potential environmental impacts. Refer also to the main Environmental Impact Assessment Report (EIAR) (Volume 2) submitted as part of this planning application.

The EIAR is presented in three volumes as follows:

**Volume 1** – Non-Technical Summary (NTS). This is a non-technical explanation of the assessments and supporting documentation presented in Volume 2 (Main EIAR) and Volume 3 (Appendices) of the EIAR.

**Volume 2** – EIAR ; and,

**Volume 3** – EIAR Appendices (Appendix 1- Appendix 16)

The following environmental topics have been fully assessed within the EIAR document;

- Chapter 4 – Population and Human Health
- Chapter 5 – Biodiversity
- Chapter 6 – Landscape and Visual
- Chapter 7 – Air Quality
- Chapter 8 – Climate
- Chapter 9 – Noise and Vibration
- Chapter 10 – Traffic and Transportation
- Chapter 11 – Land, Soils and Geology
- Chapter 12 – Water
- Chapter 13 – Cultural Heritage
- Chapter 14 – Material Assets
- Chapter 15 – Major Accidents and Disasters

The EIAR has been prepared by competent experts. Consultation was undertaken with statutory organisations at various stages of the pre-planning process and subsequently informed the preparation of this EIAR document. All comments and feedback received from the environmental consultees are addressed in full within the EIAR.

Cumulative impacts for environmental factors have been addressed within the EIAR (refer to Chapter 16, Volume 2 – EIAR). Interactions between impacts on various environmental factors have also been addressed within the EIAR (refer to Chapter 17, Volume 2 – EIAR). All mitigation and monitoring commitments detailed within the EIAR have been included in a separate compendium ‘A Schedule of Environmental Commitments’ presented within the EIAR (refer to Chapter 18, Volume 2 – EIAR).

For the purposes of this NTS, a summary of residual impacts are also presented (refer to Chapter 19, Volume 1 of the EIAR).

As previously noted, an Appropriate Assessment (AA) Screening was undertaken as part of this application to consider the potential impacts of the Proposed Project on the conservation interests of Natura 2000 Sites and to determine if there was a requirement for a Natura Impact Statement (NIS).



Based on the findings of the AA Screening the following conclusions have been made:

*'Following the precautionary principle Cregganna Marsh SPA, Inner Galway Bay SPA and Galway Bay Complex SAC have been screened in due to potential impacts to groundwater during the construction phase and so a Stage 2 AA is required'.*

An NIS has been prepared which sets out mitigation measures which will reduce both the likelihood and scale of any potential impacts to such a degree that any residual impacts will not adversely affect the integrity of the SAC. The NIS concluded that:

*'Following a comprehensive evaluation of the potential direct, indirect and in-combination impacts on the qualifying interests of Galway Bay Complex SAC, Cregganna Marsh SPA and Inner Galway Bay SPA and the implementation of the proposed mitigation measures, it has been concluded beyond reasonable scientific doubt by the authors of this report that there will be no residual impacts and the Proposed Project, alone or in combination with other plans and projects, will not have an adverse effect on the integrity of these, or any other, European sites'.*





Figure 1-1 - Site Location Map (showing Proposed Project boundary)



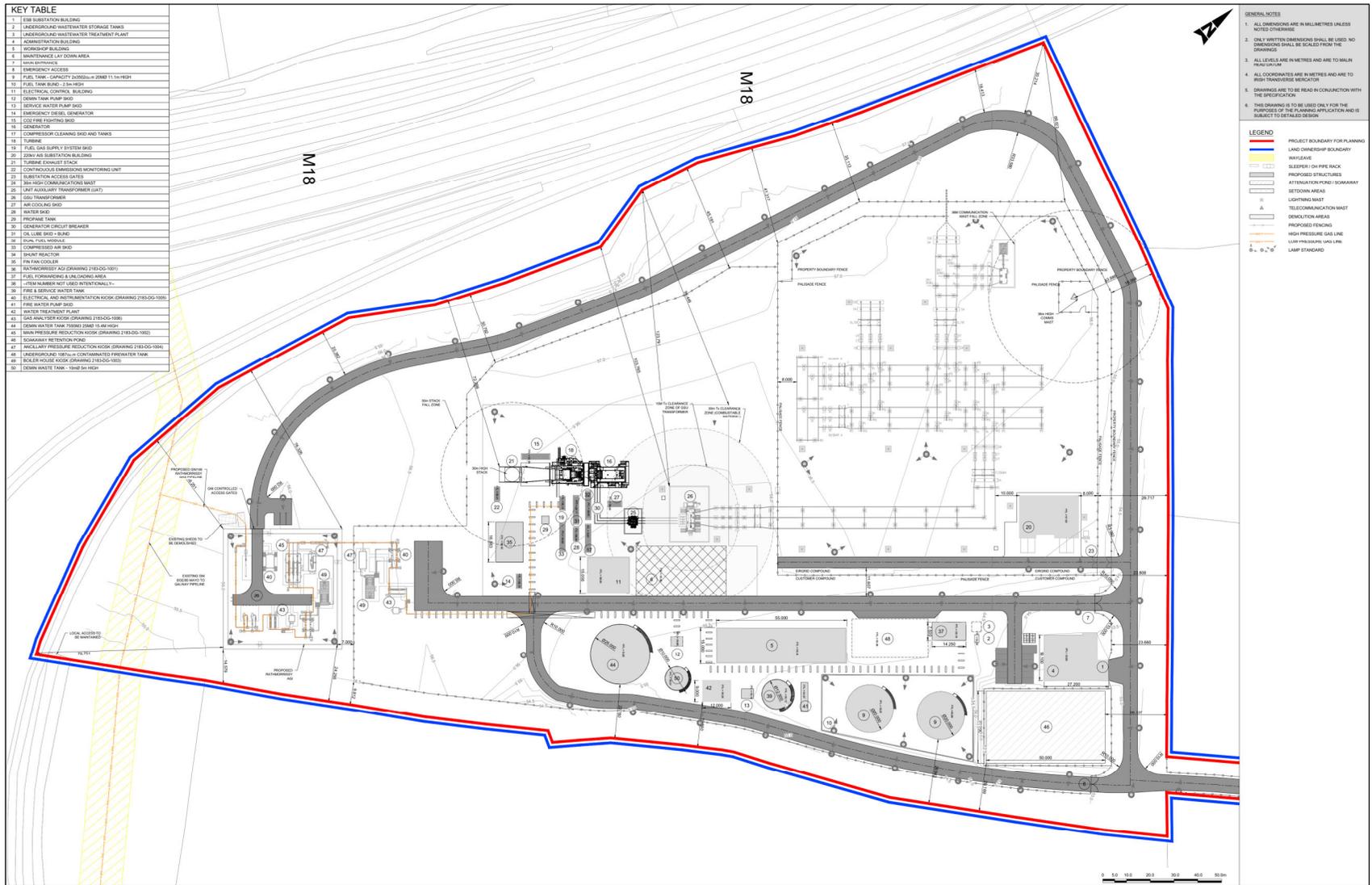


Figure 1-2 - Proposed Peaker Plant Site Layout (showing relevant section of Proposed Project Boundary)



## 2. Project Description

### 2.1 Nature and extent of the Proposed Project

The Proposed Project includes construction, operation and decommissioning phases. The main elements of the project are described as follows:

- **Proposed Peaker Plant:** An Open Cycle Gas Turbine (OCGT), generator and ancillary equipment including a 30m high stack;
- **Proposed Above Ground Installation (AGI):** Gas Networks Ireland (GNI) named Rathmorrissey AGI which will connect to the mains transmission gas network;
- **Proposed Gas Networks Ireland (GNI) Underground Gas Transmission Pipeline,** which will connect to the mains gas network; and,
- **Proposed 220kV On-Site Substation And Underground Cable Grid Connection Route,** which will connect to Cashla 220kV substation.

The interrelationship of these elements is presented in Figure 2-1.

The overall purpose of the project is to provide additional electricity generating capacity to assist in advancing Ireland's energy transition goals by ensuring security of supply during periods when electricity demand is higher than average and cannot be met by existing renewable energy technologies on the system. It is proposed that the project will operate until 31 December 2050.

### 2.2 General Overview

In brief, the Cashla Peaker Plant comprises a single open-cycle gas turbine and generator with associated auxiliary support equipment. Natural gas is combusted in a dry low nitrogen oxides (NO<sub>x</sub>)<sup>1</sup> combustion system which pre-mixes natural gas with air prior to combustion and then dilutes the combustion products with excess air from the compressor. This system serves to minimise the generation of thermal nitrogen oxides (NO<sub>x</sub>) from air borne nitrogen whilst also ensuring complete combustion minimising the generation of Carbon Monoxide (CO). The hot compressed air from the combustor expands in the gas turbine which absorbs the thermal energy and turns a directly connected electrical generator. The air leaving the turbine then passes through a noise reducing silencer before exiting via the gas turbine vertical exhaust stack. The generator produces electricity for transmission via the proposed onsite 220 kV air-insulated substation to EirGrid's network at the Cashla substation.

To comply with Commission for Regulation for Utilities (CRU) requirements to ensure security of energy supply, low sulphur diesel will be stored (via 2 no. above ground 11.1 m high storage tanks with a total combined capacity of 5470 tonnes (or 6670m<sup>3</sup>) as a backup fuel for the gas turbine and is a secondary fuel source. A quantity of propane gas is used to initiate combustion in the gas turbine when starting with low sulphur diesel. One tonne of propane gas will be stored which is sufficient for around 30 start events. It should be noted that it is expected that operation on low sulphur diesel oil would only occur in exceptional circumstances such as an interruption to gas supplies or other electricity grid system emergencies. Other than occasional low sulphur

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<sup>1</sup> refers to nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>)



diesel system testing for short periods, the use of low sulphur diesel fuel is expected to be rare with most years having no requirement other than mandatory testing. Mandatory testing on the low sulphur diesel backup fuel is anticipated to occur for up to 18 hours per annum in accordance with EirGrids Requirements (the Transmission System Operator) Grid Code. This testing involves starting up the gas turbine on low sulphur diesel fuel for a brief period sufficient to confirm this backup function remains reliable.

A Flow Diagram depicting the main components of the Cashla Peaker Plant is presented in Figure 2-1.

Depending on the technology that is used, the open cycle gas turbine will have a total output capacity of either 325 Megawatts (MW) or 334MW. The turbine parameters are the same in both cases, it is only the output capacity that will change depending on the technology used. However, there may be minor differences in noise and vibration levels or emission levels, depending on which technology is used. Accordingly, this EIAR has fully assessed both technologies, as described in further detail in Chapter 4 to Chapter 15, Volume 2 of the EIAR.



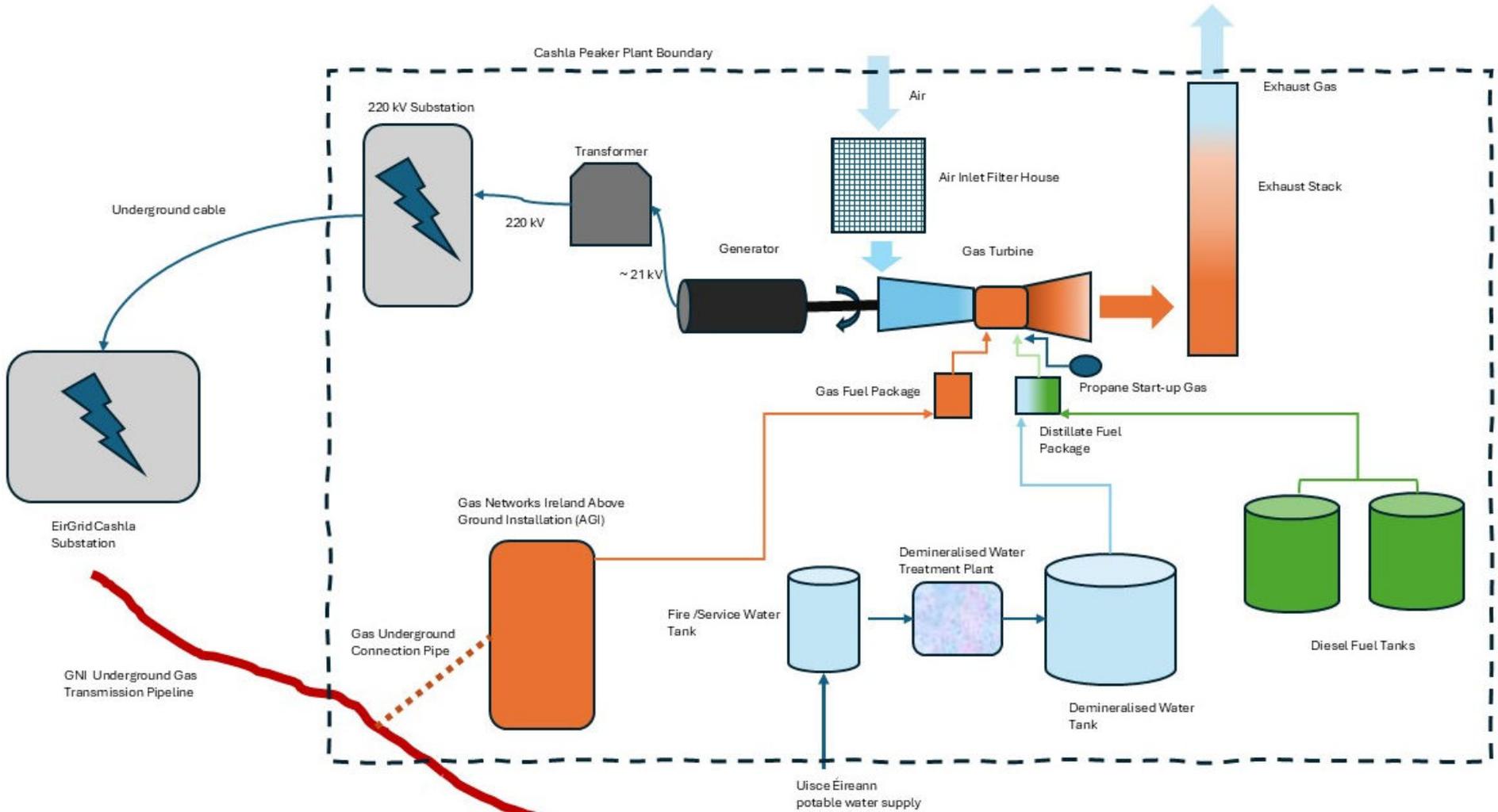


Figure 2-1 - Flow Diagram depicting the main components of the Proposed Project



## 2.3 The Proposed Project

The Proposed Project site, named the Cashla Peaker Plant Site, is approximately 19.17 Ha, and is located within the townlands of Pollnagroagh and Rathmorrissy, Athenry, Co. Galway.

The Proposed Project comprises the following infrastructure:

- a) The construction of an open-cycle gas turbine (OCGT) and generator with ancillary equipment including a 30 m high stack (diameter of 7m) and monitoring unit, fuel storage and supply systems, cooling and air systems, compressed air and gas handling skids, a grid step-up transformer within a bund, an auxiliary transformer with generator circuit breaker and an emergency low sulphur diesel generator. The construction of ten buildings on-site including one single-storey administration building (approximately 390sqm), one single storey ESB Substation building (approximately 32.5sqm), one single-storey workshop (approximately 750.5sqm), one single storey water treatment plant building (approximately 104sqm), fuel forwarding and unloading area (approximately 104sqm), one single-storey electrical control building (approximately 243.5sqm), one single storey gas analyser kiosk (approximately 6.25sqm), one single-storey boiler house kiosk (approximately 37sqm), one single-storey ancillary pressure reduction kiosk (approximately 26sqm) and a single-storey electrical and instrumentation kiosk (approximately 19sqm). The installation of five above-ground tanks including two banded fuel tanks (approximately 11.1m high), one fire and service water tank (approximately 13m high), one demineralised water tank (approximately 15.4m high) and one demineralised waste tank (approximately 5m high).
- b) The construction of a Gas Networks Ireland (GNI) above ground pressure regulating installation, known as an Above Ground Installation (AGI). The AGI (named Rathmorrissy AGI) will connect to the mains transmission gas network which exists within the site. The AGI infrastructure will occupy an enclosed area of approximately 2,500 sq.m. It encompasses five single-storey buildings: the gas analyser kiosk (approximately 6.25 sqm), the boiler house kiosk (approximately 37 sqm) including 10 no boiler flues approximately 5.67 m above ground level and emergency generator, two pressure reduction kiosks – main (approximately 72 sqm) including approximately 5.24 m high vents, and ancillary (approximately 21.7 sqm) including approximately 3.72 high vents – and the electrical and instrumentation kiosk (approximately 19 sqm). Ancillary infrastructure will include a gas meter, filters, heat exchangers, and above-ground pipework. The compound will include lighting, 3 no. parking spaces, internal access routes, concrete bases to support the infrastructure, and stone-chipped surfacing. It will be secured by an approximately 2.4 m high fence with an access gate.  
  
*It is noted that the connection to the existing mains gas network (Mayo–Galway pipeline (BGE/85)) will be undertaken via a new transmission pipeline (named GNI146). The GNI146 gas pipeline is subject to Section 39A Consent under the Gas Act 1976, as amended.*
- c) Ancillary works including the provision of a new gated vehicular entrance off the L3103, the construction of an access road from the proposed Cashla Peaker Plant Site entrance to the new entrance off the L3103, the demolition of one farm outbuilding (in ruins), construction of internal access roads, hardstanding, security fencing (2.4m high), CCTV and gates, provision of a wastewater treatment system and associated underground wastewater storage tanks, drainage (foul and storm), soakaway retention pond, propane tank, construction of underground firewater retention tanks, provision of parking (12 no. spaces including mobility and EV Parking) and laydown area, 20 no. cycle parking spaces, landscaping and all ancillary on-site development works.



d) The construction of an ESB substation compound within the Cashla Peaker Plant site. The infrastructure will include a 4-bay 220 kV substation incorporating a single-storey Air-Insulated Switchgear (AIS) substation building (approximately 388sqm) and access road; a 36m high telecommunications mast; a shunt reactor, ancillary works including lighting, security fencing (2.4m high), internal tracks, and 4 no. carparking spaces. It also consists of the construction of approximately 8.1 kilometres of an underground grid connection route and laying of cable from the proposed ESB Substation in the Cashla Peaker Plant Site to the Cashla 220kV Substation along the L7109, L71093, L7108 and L3103 roads and across the townlands of Rathmorrissy, Pollnagroagh, Moanbaun, Castlelambert, Knocknacreeva, Caraunduff, Caherbriskaun, Lisheenkyle East, Barrettspark, Cashla, Athenry, Co. Galway. The construction methodology includes three horizontal directional drilling (HDD) operations beneath the M6 and M17 motorways to minimise surface disruption. In total, the project site covers approximately 19.17 hectares. The 220kV substation and associated 220kV grid connection will be subject to a separate Strategic Infrastructure Development planning application submitted to An Coimisiún Pleanála.

As part of the application for permission, both an Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been prepared for the Proposed Project. These reports assess and outline the potential environmental effects of the project and ensure it aligns with EU regulations for environmental protection.

The Proposed Project involves an activity (i.e., the Peaker Plant) that will require an Industrial Emission Licence from the Environmental Protection Agency (EPA). This ensures that the Proposed Project meets all necessary environmental standards related to emissions and other factors impacting the environment and human health.

Additionally, the Proposed Project includes the establishment of a facility where safety measures under the Control of Major Accident Hazards (COMAH) will apply. The COMAH Directive is transposed into Irish law by S.I. No. 209/2015 - Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (the COMAH Regulations). These regulations are designed to prevent and limit the consequences of potential industrial accidents, ensuring the project is both safe and compliant with industry best practices.

Construction of the Cashla Peaker Plant is expected to commence in Q2-2027 and last approximately 18 months, while the construction of UGC Route is estimated to take nine months and some of the elements may happen concurrently if necessary.

**Table 2-1 - Estimated Construction Phasing Program**

<b>Milestones</b>	<b>Timeframe<sup>2</sup></b>
Submission of planning application	Q1 2026
ACP Planning Application decision	Q1 2027 (Q1 2028)
Civil, Mechanical, Electrical Design, Site Survey works & Mobilisation start. EPA licence application	Q1 2027 -Q2 2027 (Q1 2028-Q2 2028)
Construction and Installation	Q2 2027-Q3 2028 (Q2 2028-Q3 2029)
Commissioning	Q3 2028 (Q3 2029)
Commercial Operational Date	Q4 2028 (Q4 2029)

<sup>2</sup> These timelines are estimated at this juncture, and assume that there will be no significant delays to the overall delivery programme through the planning, detailed design, mobilisation, construction / installation and commissioning phases.



The construction methodology includes three horizontal directional drilling (HDD) operations beneath the M6 and M17 motorways (and associated work areas, launch/reception pits) to minimise surface disruption.

Further details on all elements of the Proposed Project are presented in Chapter 2 Project Description, Volume 2 of the EIAR.



# 3. Alternatives

## 3.1 Consideration of Reasonable Alternatives

The assessment of Reasonable Alternatives is presented within Chapter 3, Volume 2 of the EIAR. A range of reasonable alternatives was considered during the design and assessment of the Proposed Project. This process examined different ways of meeting the project's objectives while taking account of potential effects on the environment.

The consideration of alternatives focused on options that were technically feasible, realistic, and capable of delivering the required level of electricity generation and grid support. Environmental considerations were a key factor throughout the process and played an important role in shaping the final design.

### 3.1.1 The “Do Nothing” Alternative

The “Do Nothing” alternative considers what would happen if the proposed project did not proceed. In this case, the land would remain in agricultural use and no new electricity generation or infrastructure would be provided at the site. While this option would avoid the potential environmental effects associated with construction, operation and decommissioning of the project, it would not contribute to national energy security or the operation of the electricity grid. Without additional rapid-responding electricity generation, there would be an increased reliance on existing generation sources during periods of peak demand or low renewable energy output. This could reduce the resilience of the electricity system and limit Ireland's ability to integrate higher levels of renewable energy such as wind and solar power.

For these reasons, the do-nothing option was not considered a suitable alternative, as there is a clear need for the proposed project.

### 3.1.2 Site Location Alternatives

The Peaker Plant requires a connection to an existing gas supply. This limits site selection to areas within the vicinity of an existing gas pipeline. Existing gas pipelines operated by Gas Networks Ireland are presented in Figure 3-1. Furthermore, to operate the Peaker Plant, a connection to an existing substation is required to connect into the national grid. Site selection was therefore also limited to sites within the vicinity of a substation connection.

A number of broad areas east of Galway City were examined where suitable gas and electricity infrastructure exists. Within these areas, several potential site locations were identified and assessed against environmental, planning, engineering, and availability constraints. Other locations were discounted due to the presence of sensitive environmental features, proximity to protected sites, archaeological constraints, or conflicts with existing land uses and infrastructure. Some locations lacked suitable access or services. Following this assessment, the selected site near Athenry was identified as the most suitable option. Following a review of all identified potential sites it was determined that the Proposed Project site location was the best performing site option, specifically due to the intersection of the existing gas transmission lines and electricity grid infrastructure, land availability and lack of significant environmental constraints.





Gas Networks Ireland

# Pipeline Map

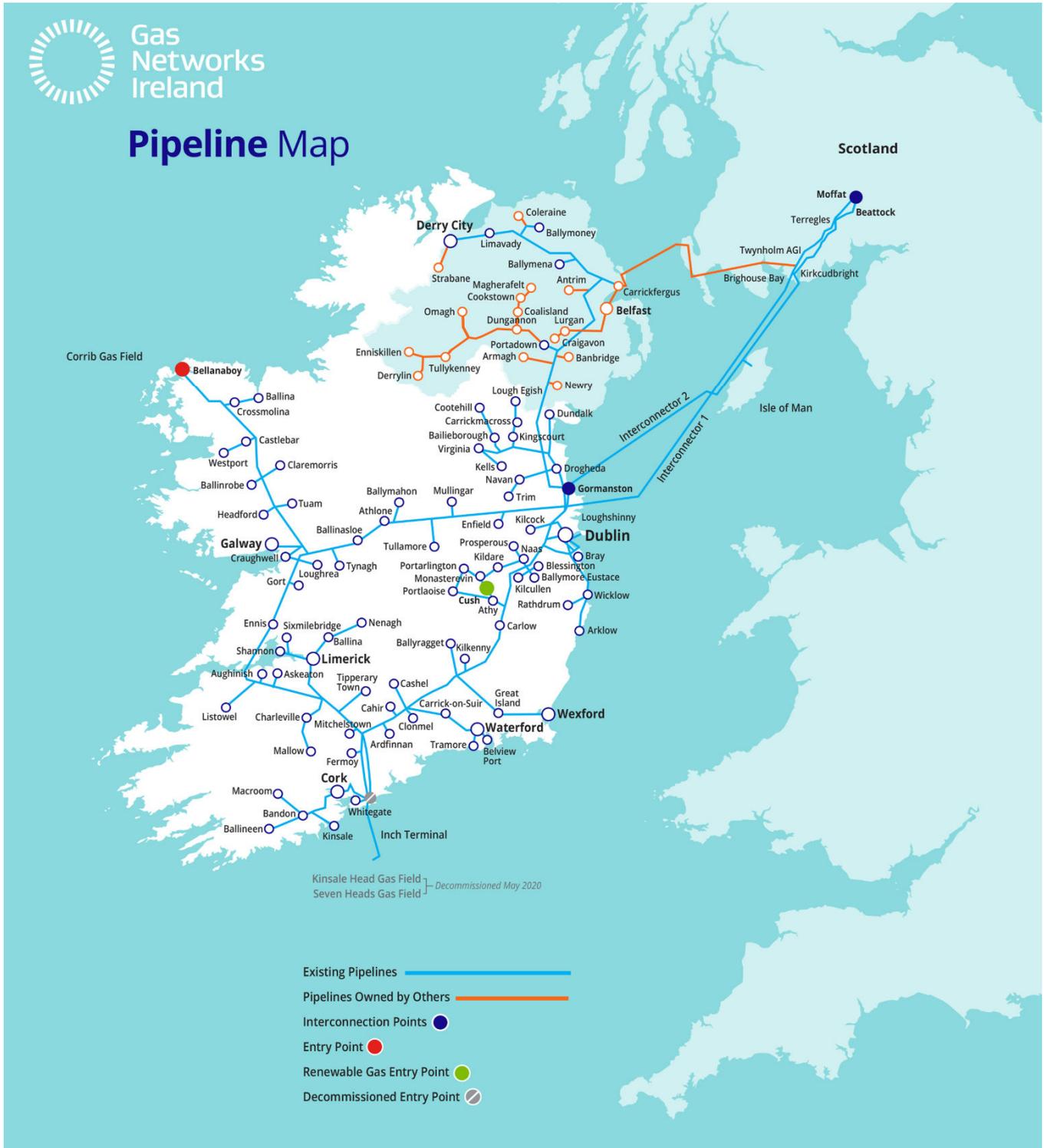


Figure 3-1 - Existing Gas Pipeline Network in Ireland



## 3.1.3 Operational and Design Alternatives

### 3.1.3.1 Operational Lifespan

Different operational lifespans were considered for the Proposed Project. A time-limited operational life up to 31 December 2050 was selected to ensure consistency with national climate policy and Ireland's statutory commitment to achieving net-zero greenhouse gas emissions by 2050. This approach also allows flexibility for future changes in technology, policy, and energy demand.

### 3.1.3.2 Plant Capacity

Alternative plant capacities were examined. The selected capacity reflects the requirements set by the national electricity grid operator to support the grid during periods of high demand or low renewable output. Larger plant sizes were considered but discounted as they were not required by the grid and would have introduced unnecessary potential environmental and financial impacts. Smaller capacities would not provide sufficient grid support.

### 3.1.3.3 Technology Options

Different generation technologies were assessed (i.e. open-cycle versus combined cycle). The project will use an open-cycle gas turbine, which was selected because it can start up quickly and respond rapidly to changes in electricity demand. This makes it well-suited to its role as a peaking plant, operating only during periods when additional generation is needed.

Although a combined cycle plant is more efficient once at its maximum load, for short generation periods to support the grid, the combined cycle can require more fuel to be combusted and therefore more emissions due to its much longer startup time compared to an open cycle. Therefore alternative technologies designed for continuous operation were not considered appropriate, as they are slower to respond, require larger buildings and infrastructure, and would result in greater environmental impacts for the intended level of use.

### 3.1.3.4 Fuel Alternatives

The project represents critical infrastructure powered by the national gas network when it is called on. The use of natural gas (via. existing network) is proposed as the primary fuel. This option avoids the need for large on-site fuel storage and is compatible with the existing energy infrastructure. The plant is designed to accommodate future changes to lower-carbon gases, in line with national plans for gas network decarbonisation. GNI has developed its Pathway to a Net Zero Carbon Network, which outlines how the national gas network can transport 100% renewable gas by 2045, playing an essential role in transitioning the electricity sector to climate neutrality.

A secondary fuel supply is required under electricity grid code rules to ensure the plant can operate during rare situations when gas is unavailable. Two main options were considered and assessed:

- Hydrotreated Vegetable Oil (HVO)
- Low sulphur diesel

HVO offers climate and air-quality benefits but is not yet widely available in Ireland and is not fully supported by all suitable turbine manufacturers. There is limited practical experience with the use of HVO in large industrial turbines, and as a result, adopting this fuel at this scale could present a reliability risk as an early adopter. While the potential use of lower-carbon fuels such as HVO has been carefully considered, the absence of a



demonstrably secure, scalable and verifiable supply suitable for long-term emergency generation means that such fuels cannot presently be relied upon for this development without introducing unacceptable operational risk. In addition, the rapidly increasing demand for HVO across multiple sectors raises concerns about future availability and supply reliability.

Low sulphur diesel was selected as the secondary fuel because it is widely available, fully compatible with available turbine technology, and meets national grid requirements for emergency operation. Its use is expected to be very infrequent and limited to exceptional circumstances. The fuel will be stored using highly conservative containment measures to minimise potential environmental risk. The development is designed to remain fuel-flexible within the parameters of the assessed scheme, allowing for the future substitution of lower-carbon fuels (where such substitution would not give rise to increased environmental effects and where secure supply can be demonstrated).

### 3.1.3.5 Grid Connection Alternatives

Alternative grid connection options were examined, including different substations, connection technologies, and route corridors. The 220kV Cashla Substation was selected based on its proximity, available capacity, and compatibility with the gas supply network. Both overhead lines and underground cables were considered for the grid connection, as presented in Figure 3-2, and were evaluated based on technical, environmental, and community criteria.



Figure 3-2 – Grid route options assessed for the grid connection between the Peaker Plant and Cashla Substation





Structural and road capacity assessments showed that one route was suitable (blue route), while the other (red route) was constrained by bridge capacity. The suitable route (blue route) was therefore selected as the preferred option.

### **3.1.3.7 Alternative Layouts and Construction Methods**

A range of site layouts and building configurations were developed and refined during the design process. These iterations considered environmental impacts, noise, visual appearance, access, drainage, safety, and efficient use of land. Construction methods were also reviewed, particularly in relation to local ground conditions. The final approach allows for construction methods based on site-specific conditions, ensuring ground stability and environmental protection.

### **3.1.3.8 Conclusion**

The assessment of reasonable alternatives demonstrates that the Proposed Project has been shaped by a careful and iterative design process that integrates environmental considerations with technical and policy requirements. The selected options for site location, plant design, technology, grid connection, fuel use, and transport represent the most appropriate and balanced solutions available. The selected design meets the project's objectives while avoiding or minimising potential environmental effects wherever practicable.



## 4. Population and Human Health

An assessment of the potential impacts from the Proposed Project on Population and Human Health was undertaken. Relevant guidance was used and the assessment considered both the wider population, and the local population.

The Population and Human Health Impact Assessment is contained within Chapter 4 Population and Human Health, Volume 2 of the EIAR.

### 4.1 Impact Assessment

#### 4.1.1 Construction

Consideration of construction impacts of the Proposed Project has shown that there would likely be **significant adverse impacts** associated with disruption or changes to access to residential properties adjacent to the proposed cable route and businesses and community assets (including Lisheenkyle National School) in close proximity to the Proposed Project. These effects are expected as a result of the installation of the cable and the associated road closures and diversions. These effects would be **temporary to the construction phase**.

Whilst **not anticipated to be significant**, adverse effects are also anticipated for residents in the wider study area, walkers, cyclists and horse riders and users of services in the wider area during construction due to disruption to access and increased journey lengths. Residents, businesses and local communities in proximity to the proposed abnormal load routes may also be affected by disruption to roads including delays, temporary closures and creation of temporary roads. **Non-significant adverse effects** are also anticipated in terms of safety for residents as a result of construction activities and introduction of construction traffic and for construction workers who are exposed to potential human health risks.

**Non-significant beneficial effects** are anticipated for businesses and local communities in terms of employment and income due to increased opportunity for employment and stimulation of the local economy and job market.

Taking account of mitigation measures, as detailed further in Chapter 4, Volume 2 of the EIAR, all effects identified during construction will be **temporary** and **limited to the construction phase**.

#### 4.1.2 Operation

During operation, the peaker plant will be regulated under an IE Licence with emission limits set to protect human health. **No significant effects** have been identified during the operational phase although, **non-significant effects** have been identified in terms of safety for residents should they enter the site and for site works, although it is expected that appropriate mitigation will be implemented to manage these risks.

**Non-significant beneficial effects** have been identified during operation of the plant for local communities as there may be some opportunities for employment.



### 4.1.3 Decommissioning

**No significant impacts** have been identified during the decommissioning stage. **Non-significant impacts** have been identified for workers involved in decommissioning due to potential risk of injury. There may be some **minor beneficial impacts** for local communities associated with the opportunity for employment during decommissioning.



# 5. Biodiversity

An assessment of the potential impacts to Biodiversity was undertaken. A Natura Impact Statement (NIS) was also prepared in order to assess the potential impacts of the Proposed Project on designated European Sites.

The Biodiversity Impact Assessment is contained within Chapter 5 Biodiversity, Volume 2 of the EIAR.

## 5.1 Receiving Environment

The existing biodiversity baseline was established using a combination of site surveys and desktop data. Site surveys recorded no protected habitats or flora, as well as no invasive alien plant species within the study area. Notable fauna observed were limited to fox, three red-listed bird species, and low levels of activity for six species of bat. Adopting the precautionary principle, smooth newt are assumed to exist in an area of surface water ponding adjacent to the Proposed Project boundary. No invasive fauna were recorded during any surveys.

## 5.2 Impact Assessment

### 5.2.1 Do Nothing Scenario

In the absence of the Proposed Project, it is assumed that the area would remain as highly managed agricultural grassland. The value of the proposed project area to house locally important populations of birds and bats would continue to exist (assuming that no linear features, such as treelines, hedgerows and stonewalls were removed from the proposed Peaker plant site).

Additionally, the Proposed Project Site would continue to provide a habitat for a local fox population.

### 5.2.2 Construction Phase

Potential impacts during the Construction Phase with potential significant effects are as follows:

#### Impacts on bats:

- Slight removal of bat commuting/foraging habitats – at the local scale, this represents a permanent significant negative impact
- Light disturbance to bats – this represents a short-term significant negative impact at the local scale.

#### Impacts on birds:

- Loss of breeding bird breeding/foraging habitats – this represents a permanent non-significant negative impact at the local scale.

#### Impacts on mammals:

- Loss of existing fox den – this represents a permanent significant negative impact at the local scale.
- Mammal entrapment in excavations/other construction areas – this represents a potential permanent significant negative impact at the local scale.

#### Impacts on amphibians:

- Amphibian habitat deterioration – this represents a short-term significant negative impact at the local scale.



#### **Impacts to water quality:**

- Water quality deterioration as a result of potential groundwater quality impacts – pre-mitigation, this represents a short-term negative significant impact.

### **5.2.3 Operational Phase**

Potential impacts during the Operational Phase with potential significant effects are as follows:

#### **Invasive alien species impacts:**

- Accidental spread of invasive alien plant species during landscaping – this represents a permanent significant negative impact.

#### **Impacts on bats:**

- Lighting disturbance to bats – this represents a permanent significant negative impact at the local scale.

#### **Impacts on mammals**

- Creation of a new wooded area during landscaping which will facilitate local foraging/commuting mammals – this represents a permanent significant positive impact at the local scale.

## **5.3 Mitigation**

### **5.3.1 Construction Phases**

Specific mitigation measures relevant to biodiversity during the Construction Phase are as follows:

- The landscape plan contains proposed planting that will offset (with a net-positive) habitat loss during the construction phase. Given the extensive planting of a significant number of trees, hedgerows and wildflowers proposed in the Landscape Design Plan, there will be an increase in ecologically valuable habitat at the site. This will constitute a permanent significant positive impact on habitats as a result of the Proposed Project.
- A pre-construction survey will be carried out prior to any site clearance. This will ensure that no new rare flora/fauna have become established on the site of the Proposed Project.
- Where construction works require lighting during evening time, directional lighting will be used to direct light away from trees and hedgerows used by bats (it is noted that no bat roosts were recorded within the Proposed Project area).
- To negate the loss of habitat for breeding birds, all vegetation clearance will occur outside of the breeding bird season (1<sup>st</sup> March to 31<sup>st</sup> August inclusive).
- A camera trap will be deployed at the existing fox den in the weeks leading up to its removal. If cubs are present then removal of the den will occur after the summer months when the den is not in use. This will greatly reduce the potential impact to fox.
- To negate impacts to amphibian habitat and water quality, groundwater mitigation measures such as bunding, containment and monitoring will be adopted.



## 5.3.2 Operational Phase

Specific mitigation measures relevant to biodiversity during the Operational Phase are as follows:

- Native Irish plant species will be used during landscaping to reduce the potential for accidental invasive spread. Additionally, periodic landscaping inspections will be carried out every six months for two years after planting.
- To negate light disturbance to bats during the Operational Phase, the lighting has been designed in-line with relevant Best Practice guidance. Lighting will predominantly be of 2700K, and no light levels will exceed 1 lux past the existing site boundary.

## 5.3.3 Decommissioning Phase

At the end of life of the plant, unused fuel, fluids and chemicals will be re-used or repurposed elsewhere, where possible. If no viable re-use option exists, the fluids will be removed by a licenced waste contractor for processing in a suitable treatment plant. Process equipment will be removed and repurposed with the operator's other facilities if possible or will be sold to the used equipment market where such demand exists. If there is no viable re-use option the equipment components will be removed to licenced recycling facilities and recycled in so far as possible.

Following the Decommissioning Phase, the Proposed Project site will be restored to the habitats previously present onsite, with the exception of the woodland planting bordering the site which will be left in place.

## 5.4 Monitoring

### 5.4.1 Construction Phase

During the Construction Phase monitoring will constitute:

- An Ecological Clerk of Works will carry out general monitoring during the Construction Phase, and will implement the relevant Construction Phase mitigation measures (refer to CEMP, Appendix 2-10, Volume 3 of the EIAR).

### 5.4.2 Operational Phase

During the Operational Phase monitoring will constitute:

- Landscape monitoring to ensure no accidental introduction and/or spread of invasive species will be carried out twice per year for two years following planting. Landscape monitoring will also assess the condition of growth and any replanting requirements (as detailed further in Chapter 6 Landscape and Visual, Volume 2 of the EIAR).



## 5.5 Residual Impact Assessment

The residual impacts of the Proposed Project in relation to biodiversity are as follows:

### Impacts on habitats:

- Given the extensive planting in the proposed landscaping, the overall impact to habitats will be **permanent significant** and **positive**.

### Impacts on bats:

- Impacts on bats – given the extensive planting in the proposed landscaping which will create new foraging/commuting habitat for bats, the overall impact to bats will be **permanent significant** and **positive**.
- Impacts relating to light disturbance during both Construction and Operation are considered **not-significant** following mitigation.

### Impacts on birds:

- Impacts on birds – given the extensive planting in the proposed landscaping, the overall impact to birds will be **permanent significant** and **positive**.
- Mitigation in the form of vegetation clearance being timed to outside of the breeding bird season there will be **no significant** disturbance impacts.

### Impacts on mammals:

- Impacts on mammals – given the mitigation measures during the Construction Phase there will be **no significant** impacts to mammals.

### Impacts on amphibians:

- Impacts on amphibians – given the water protection mitigation measures, deterioration of amphibian habitat will **not be significant**.

### Impacts to groundwater quality:

- Impacts to groundwater – given the groundwater protection mitigation measures, water quality deterioration as a result of groundwater pollution will **not be significant**. It is noted that given the baseline hydrological setting (as detailed further in Chapter 12 Water, Volume 2 of the EIAR) no potential direct impacts to receiving surface water quality have been identified.

### Invasive alien species impacts:

- Spread of invasive species – given the mitigation and monitoring during the Operational Phase, this potential impact of invasive species is **not significant**.

The mitigation measures presented in Chapter 5 Biodiversity, Volume 2 of the EIAR, and the NIS (AtkinsRealis, 2026) will ensure that the Proposed Project will have no adverse effects on the integrity of any designated European Sites, either alone or in-combination with other plans or projects, as per the conclusions of the NIS (AtkinsRealis, 2026) which state:

*'Following a comprehensive evaluation of the potential direct, indirect and in-combination impacts on the qualifying interests of Galway Bay Complex SAC, Cregganna Marsh SPA and Inner Galway Bay SPA and the implementation of the proposed mitigation measures, it has been concluded beyond reasonable scientific doubt by the authors of this report that there will be no residual impacts and the Proposed Project, alone or in combination with other plans and projects, will not have an adverse effect on the integrity of these, or any other, European sites'*



# 6. Landscape and Visual

This section summarises the effects of the proposed development on landscape and visual receptors, and the significance of the effects identified.

The Study Area for the assessment was devised as an area sufficient to enable the potential significant effects of the project on landscape character and views/ visual amenity to be analysed. The Study Area includes areas of land within a 3.5km radius of the centre of the proposed Peaker Plant site.

Landscape and Visual Impact Assessment (LVIA) is used to identify and assess the likely significance of the effects of change resulting from a project. The two components of LVIA are:

- Assessment of landscape effects: assessing effects on the landscape as a resource in its own right; and
- Assessment of visual effects: assessing effects on specific views and on the general visual amenity experienced by people.

The Landscape and Visual Impact Assessment therefore describes the potential effects of the Proposed Project on the character of the landscape, and on key views within the defined study area, in order to evaluate if these effects will be significant.

The Landscape and Visual Impact Assessment is contained within Chapter 6 Landscape and Visual, Volume 2 of the EIAR.

## 6.1 Receiving Environment

### 6.1.1 Landscape

Galway County Council Landscape Character Assessment, June 2022 is included in Appendix 4 of the Galway Development Plan 2022-2028 and defines two Landscape Character Types and one Landscape Character Unit coinciding with the study area: Central Galway Complex Landscape Type, Urban Environs Landscape Type and 6b Southern River Clare Basin Landscape Character Unit (Refer to Landscape Character Types drawing, Appendix 6, Volume 3 of the EIAR).

The Landscape Type **Central Galway Complex Landscape** is described within the Galway County Council Landscape Character Assessment as follows:

*'Most of Galway's settlement and agriculture, with associated roads and infrastructure, occur within this busy working landscape. Each period of history has attracted farming and settlement to the fertile, level soils of this landscape. Ringforts, tower-houses, field walls and parklands occur throughout this area, as evidence of these past uses. Today, the rural housing, with associated roads, schools, powerlines, clubs and signposts that create the domesticated landscape character in the environs of towns, villages and smaller settlements that recurs throughout this landscape. The appearance and character of the majority of this landscape type remains dominated by grass-based agriculture. Fields generally have low enclosure, with limestone walls evident in many areas. The wider landscape is punctuated by stands of large mature trees – often remains of parkland landscapes that surrounded large 17th – 19th estate residences. In some areas there are large blocks of commercial forestry that further subdivide these grasslands. Though largely level, roads along occasional low ridges provide long-distance vistas that extend to distant horizons in other counties.'*



Landscape Type Central Galway Complex Landscape is divided into Landscape Character Units. Landscape Character Unit, 6b. Southern River Clare Basin is within the study area. The entire Proposed Project site is within 6b. Southern River Clare Basin.

The key characteristics of Landscape Character Unit, **6b. Southern River Clare Basin** is described within the within Galway County Council Landscape Character Assessment as follows:

- Undulating long-occupied working landscape with high levels of settlement;
- Large regular fields and numerous parkland remnants;
- Extensive wetland areas near Lough Corrib; and
- Low enclosure except for localised areas of mature parkland trees.

Galway County Council Landscape Character Assessment classifies the sensitivity of both Landscape Type Central Galway Complex Landscape and Landscape Character Unit, 6b. Southern River Clare Basin as Class 1 – Low Sensitivity: Unlikely to be adversely affected by change.

The Landscape Type **Urban Environs** includes the part of the study area at/ near Athenry (note the Proposed Project site is not located within Urban Environs landscape type) and is described within the Galway County Council Landscape Character Assessment as follows:

*'This category occurs throughout the county outside of the administrative boundaries of settlements of all sizes. Urbanised landscapes occur around settlements. These landscapes often concentrations of individual dwellings, old and new. Around larger towns they also consist of modern estate housing and recreation facilities as well as developments of commercial, industrial and educational buildings. This pattern changes from concentric to radial along major transportation corridors that support many residential communities. Many of County Galway's urban environs are highly distinctive because of their proximity to areas of strong natural character such as the rivers, lakes or coasts. Other settlements adjoin extensive areas of naturalized scrub vegetation, bog or low-lying wetlands.'*

Galway County Council Landscape Character Assessment classifies the sensitivity of Landscape Type Urban Environs as Low Sensitivity to change.

From the field survey it was noted that the landscape in the area is generally in good condition, with intact characteristics such as undulating pasture, hedgerows, trees, historic field patterns and stone walls contributing to character. Built infrastructure is present within the study area including a major transport corridor and electricity transmission assets. There are no local, regional or national landscape designations coinciding with the rural parts of the study area. The landscape would have local importance. The value of the landscape within the study area is judged to be **Low**.

## 6.1.2 Visual

The Zone of Theoretical Visibility (ZTV) or areas of land from which the proposed Peaker Plant site may be potentially visible were identified and mapped, as presented in the Zone of Theoretical Visibility drawings, Appendix 6-1, Volume 3 of the EIAR.

The Zone of Theoretical Visibility (ZTV) was undertaken using; Tailte Éireann 10m LIDAR Digital Terrain Model (DTM), Tailte Éireann Discovery Mapping, aerial photography and the site layout/ elevation drawings. A 3D model was constructed of the proposed main project site, using multiple height target points for the proposed building heights located across the terrain data. The height data was derived from the architectural drawing information.



The Geographical Information Software (GIS) software used a viewing height of 1.60m across the study area to calculate the areas of potential visibility of the Proposed Project. The first calculation undertaken was a bare earth calculation and therefore shows maximum theoretical visibility based on landform and does not include the screening effects of intervening buildings or vegetation.

The second calculation undertaken includes the screening effects of visual buffers i.e., intervening buildings and vegetation across the study area.

The results of the study shows that the proposals (in theory) give rise to a ZTV area primarily located in a cluster within a 2km radius of the proposed main project site with further areas of potential visibility located outside the primary cluster especially in areas of rising topography to the north of the study area, so therefore it extends to 3.5km as previously stated. Refer to Zone of Theoretical Visibility drawings including Visual Buffers, Appendix 6-1, Volume 3 of the EIAR.

The visual receptors identified includes 25no. groups of people using; motorways, regional roads, local roads, settlement areas, commercial areas and public buildings.

Twenty-four viewpoint locations were selected based on professional judgement informed by the Zone of Theoretical Visibility (ZTV) and field surveys, to represent the experience of visual receptors. Refer to Figure 6-1.





**Figure 6-1 – Zone of Theoretical Visibility (ZTV) and Viewpoint (VP) Locations (VP01 - VP24)**

The viewpoints chosen, do not cover every view but have been selected to represent the different users from a range of directions and distances from the site.

The viewpoint locations are illustrated in Figure 6-1, and also on the Viewpoint Locations and Zone of Theoretical Visibility drawings, in Appendix 6-1, Volume 3 of the EIAR.

The viewpoint images are illustrated in Appendix 6-1, Volume 3 of the EIAR. Sixteen of these viewpoints were visited for the purpose of preparing verified photomontage visualisation sequences, showing the existing view, Year 1 view, and Year 15 view (where relevant, when screen planting would be approximately 9 m in height), and these are also illustrated in Appendix 6-1, Volume 3 of the EIAR.



## 6.2 Impact Assessment

### 6.2.1 Potential landscape effects

The value of Landscape Type Central Galway Complex Landscape (6b. Southern River Clare Basin) within the study area is judged to be low (Refer to Chapter 6, Volume 2 of the EIAR). The potential for impacts to this landscape from the Proposed Project is judged to be low. Therefore, the overall sensitivity of this landscape to the Proposed Project is low.

Similarly, the value of Landscape Type Urban Environs (Athenry) within the study area is judged to be low (Refer to Chapter 6, Volume 2 of the EIAR). The potential for impacts to this landscape from the Proposed Project is judged to be low. Therefore, the overall sensitivity of this landscape to the Proposed Project is low.

Overall the landscape change would be **moderate adverse** during construction (and short term); **minor adverse** during operation (and long term); **minor adverse** during decommissioning (and temporary to short term); and **minor beneficial** post-decommissioning (and permanent).

As outlined at Chapter 6, Volume 2 of the EIAR the significance of the effects including mitigation on Central Galway Complex Landscape within the study area is judged to be; **Moderate Adverse Effect** during construction, **Slight Adverse Effect** during operation, **Slight Adverse Effect** during decommissioning, **Slight Beneficial Effect** post decommissioning and permanent. The significance of the effects on Urban Environs (Athenry) Landscape Character Type within the study area is judged to be **Neutral Effect** during construction, operation, decommissioning and post-decommissioning.

### 6.2.2 Potential visual effects

The significance of the visual effect of the Proposed Project on representative viewpoints is summarised below.

**Table 6-1 - Significance of Visual Effects**

Viewpoint	Significance of Visual Effect Construction	Significance of Visual Effect Operation	Significance of Visual Effect Decommissioning	Significance of Visual Effect Post-Decommissioning
1	Moderate Adverse	Moderate Adverse	Moderate Adverse	Moderate Beneficial
2	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial
3	Neutral	Neutral	Neutral	Neutral
4	Moderate Adverse	Slight Adverse	Slight Adverse	Slight Beneficial
5	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial
6	Slight Adverse	Slight Adverse	Slight Adverse	Neutral
7	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial
8	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial
9	Neutral	Neutral	Neutral	Neutral
10	Slight Adverse	Slight Adverse	Slight Adverse	Neutral
11	Neutral	Neutral	Neutral	Neutral



<b>Viewpoint</b>	<b>Significance of Visual Effect Construction</b>	<b>Significance of Visual Effect Operation</b>	<b>Significance of Visual Effect Decommissioning</b>	<b>Significance of Visual Effect Post-Decommissioning</b>
12	Neutral	Neutral	Neutral	Neutral
13	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial
14	Neutral	Neutral	Neutral	Neutral
15	Neutral	Neutral	Neutral	Neutral
16	Neutral	Neutral	Neutral	Neutral
17	Neutral	Neutral	Neutral	Neutral
18	Neutral	Neutral	Neutral	Neutral
19	Neutral	Neutral	Neutral	Neutral
20	Neutral	Neutral	Neutral	Neutral
21	Neutral	Neutral	Neutral	Neutral
22	Neutral	Neutral	Neutral	Neutral
23	Neutral	Neutral	Neutral	Neutral
24	Neutral	Neutral	Neutral	Neutral

Mitigation measures will be implemented as follows (presented in Chapter 6, Volume 2 of the EIAR):

- Landscape planting including screen planting at the proposed Peaker Plant site has been included within the project design. The proposed Peaker Plant site will include screen planting to the site perimeter, earth mounding and planting to the western site boundary and hedgerows and grassland, as detailed within the Landscape Plans submitted for the Proposed Project.
- Vegetation removed as part of the underground cable works (including site compound areas) will be reinstated following completion.
- Careful consideration will be given to the material finishes and colours to the proposed buildings and structures within the proposed peaker plant site. The proposals will include neutral finishes to buildings and structures, as set out in the Architectural Design Statement presented in Appendix 2-9, Volume 3 of the EIAR.

During the construction, operation and decommissioning phases, the Proposed Project will result in a limited number of significant residual visual effects, principally within the immediate context of the main site. Significant adverse effects would be experienced by a small number of nearby receptors where the project would introduce new elements into the landscape and partially alter some existing views.

Beyond these areas, residual effects would be slight or neutral and not significant in EIAR terms. During the post decommissioning phase, any adverse effects would become beneficial as all site structures are removed and mitigation screen planting is retained and has matured contributing to an improvement in views.



## 7. Air Quality

This section assesses the likely air quality impacts associated with the Proposed Project, via impacts of construction dust resulting from construction / decommissioning activities (in terms of dust, human health and ecology effects), as well as potential air quality impacts via emissions from the gas turbine and generator (emergency use only), and changes in road traffic (on the nearest sensitive human health and designated habitat locations).

Mitigation measures have been incorporated, to reduce, where necessary, the identified potential air quality impacts associated with the Proposed Project. Monitoring measures will be carried out to ensure the mitigation measures are effective.

The assessment of Air Quality is contained within Chapter 7, Volume 2 of the EIAR.

### 7.1 Receiving Environment

Air quality in the vicinity of the Proposed Project is good, with key pollutants well below the relevant air quality standards. Baseline data and data available from similar environments indicates that levels of nitrogen dioxide (NO<sub>2</sub>), particulate matter less than 10 microns (PM<sub>10</sub>) and particulate matter less than 2.5 microns (PM<sub>2.5</sub>) and are generally well below the National and European Union (EU) ambient air quality standards.

The assessment of baseline air quality in the region of the proposed development has shown that current levels of key pollutants are significantly lower than their limit values. Due to the size, nature and location of the proposed development, increased road traffic emissions resulting from construction and maintenance of the proposed development are expected to have a negligible impact on air quality.

### 7.2 Impact Assessment

#### 7.2.1 Do Nothing Scenario

In the Do Nothing scenario, ambient air quality at the site will remain as per the baseline and will change in accordance with trends within the wider area (including influences from potential new developments in the surrounding area, changes in road traffic, etc).

No construction works will take place and the identified impacts of fugitive dust and particulate matter emissions will not occur at the Proposed Peaker Plant site. The Proposed Peaker Plant will not be installed and the associated emissions will not occur.

#### 7.2.2 Construction Phase

An assessment of the potential dust impacts as a result of the construction phase of the proposed development was carried out based on the UK Institute for Air Quality Management 2024 guidance document '*Guidance on the assessment of Dust from Demolition and Construction*'. This established the sensitivity of the area to impacts from construction dust in terms of dust soiling of property, human health and ecological effects. The surrounding area was assessed as being of high sensitivity to dust soiling and of low sensitivity to dust-related human health effects.



Regarding potential biodiversity effects as a result of air quality impacts, the sensitivity of the area is determined based on the distance to the source, the designation of the site, (European, National or local designation) and the potential dust sensitivity of the ecologically important species present. There are no sensitive ecological receptors within the extent of the relevant area and therefore there is no potential for impacts to sensitive ecology (i.e. local or designated European sites) from construction dust emissions.

The sensitivity of the area was combined with the dust emission magnitude for the site from the very minor demolition works, earthworks and construction activities and trackout (movement of vehicles) to determine the mitigation measures necessary to avoid significant dust impacts. It was determined that there is a risk of dust related impacts associated with the proposed project. In the absence of mitigation there is the potential for **direct, short-term, negative, and slight** impacts to air quality.

In addition, construction phase traffic emissions have the potential to impact air quality, particularly due to the increase in the number of HGVs accessing the site. Construction stage traffic did not meet the scoping criteria for a detailed modelling assessment outlined in Transport Infrastructure Ireland's 2022 guidance document '*Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106*'. The predicted increase in traffic during the construction phase falls well below nationally defined thresholds that would require detailed air quality modelling to be undertaken. In accordance with Transport Infrastructure Ireland guidance, detailed modelling is required only when traffic increases exceed specific thresholds, which is not the case for the Proposed Project. As a result, a detailed air assessment of construction stage traffic emissions has been scoped out from any further assessment and the construction stage traffic emissions will not have a significant effect on air quality.

## 7.2.3 Operational Phase

Operational phase traffic has the potential to impact air quality due to vehicle exhaust emissions as a result of the increased number of vehicles accessing the site. Given the minor operational traffic levels which will occur as a result of the proposed project, a detailed air assessment of operational stage traffic emissions has been scoped out from any further assessment and the operational stage traffic emissions will not have a significant effect on air quality. Parking provision is minimal and the associated change in vehicle movements is not expected to result in any measurable increase to baseline traffic levels.

The operational assessment involved air dispersion modelling of pollutant emissions from the operation of 1 no. turbine on natural gas, as well as emergency operation on low sulphur diesel, as part of the proposed development. The assessment evaluated the impacts from nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO) and sulphur dioxide (SO<sub>2</sub>) (low sulphur diesel only) emissions at off-site locations including nearby residential properties, and the impact of nitrogen oxides (NO<sub>x</sub>), SO<sub>2</sub> and nitrogen and acid deposition emissions at sensitive ecological receptors. The dispersion modelling has determined that concentrations of all pollutants are in compliance with the relevant ambient air quality standards. The effect of operational phase emission from the proposed development will be **direct, long-term, negative and not significant**.

## 7.2.4 Mitigation

### 7.2.4.1 Construction Phase

Detailed dust mitigation measures as outlined in Chapter 7, Volume 2 of the EIAR, and also included in the Construction Environmental Management Plan (CEMP, Appendix 2-10, Volume 3 of the EIAR) will ensure that no significant nuisance as a result of construction dust emissions from demolition, earthworks, construction and trackout (movement of vehicles) occurs at nearby sensitive receptors. Once these best practice mitigation measures, derived from the Institute for Air Quality Management 2024 guidance '*Guidance on the Assessment of Dust from Demolition and Construction*' as well as other relevant dust management guidance, are



implemented the impacts to air quality during the construction of the proposed development are considered **direct, short-term, localised, negative and not significant**, posing no nuisance at nearby sensitive receptors (such as local residences).

#### 7.2.4.2 Operational Phase

No site-specific mitigation measures are proposed for the operational phase as impacts are predicted to be not significant.

## 7.3 Residual Impact Assessment

The dust mitigation measures detailed in the mitigation section (Chapter 7, Volume 2 of the EIAR) will ensure that the residual effect of fugitive emissions of dust and particulate matter from the site will be **short-term, direct, localised, negative and not significant** in nature and will pose no nuisance at nearby receptors.

The effect of operational phase emission from the proposed development will be **direct, long-term, negative and not significant**. Furthermore, inherent design measures have been embedded in the proposed project design, and also via operational controls, which will limit emissions (i.e. use of low sulphur diesel for emergency use only, modern turbine technology and regulatory emission controls).

## 7.4 Monitoring

Monitoring of construction dust deposition along the site boundary to nearby sensitive receptors during the construction phase of the Proposed Project will be carried out, as set out in Chapter 7, Volume 2 of the EIAR, and the Construction Environmental Management Plan (Appendix 2-10, Volume 3 of the EIAR). The monitoring requirements will ensure that the dust mitigation measures are effective.

The Proposed Project will be subject to an Industrial Emissions Licence, which will be required for the facility to operate and is issued and regulated by the EPA. As part of an Industrial Emissions Licence, air emissions from the stack will be monitored continuously any time the plant is in operation. This monitoring will be undertaken using regulated and independently calibrated permanent monitoring equipment, which is subject to regular maintenance and calibration routines in line with statutory requirements. The relevant EU monitoring requirements for the Peaker Plant are given in BAT 4 of the *Commission Implementing Decision (EU) 2021/2326 of 30 November 2021 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for large combustion plants*.

The Licensee will provide these results to the EPA under the conditions of an Industrial Emissions Licence, and they will also be available to the public on the EPA's website. The EPA will make regular unannounced inspections to the facility at their discretion and undertake monitoring of their own to verify the accuracy of the monitoring data being reported by the Licensee.



# 8. Climate

This chapter assesses the likely climate impacts associated with the Proposed Project. The climate assessment is divided into two distinct sections – a greenhouse gas assessment (GHGA) and a climate change risk assessment (CCRA).

- Greenhouse Gas Emissions Assessment (GHGA) – Calculates the GHG emissions from a project over its lifetime. The assessment compares these emissions to relevant carbon budgets, targets and policy to contextualise magnitude.
- Climate Change Risk Assessment (CCRA) – Identifies the impact of a changing climate on a project and receiving environment. The assessment considers a projects vulnerability to climate change and identifies adaptation measures to increase project resilience.

The assessment of Climate is contained within Chapter 8, Volume 2 of the EIAR.

## 8.1 Receiving Environment

The existing climate baseline can be determined by reference to data from the EPA on Ireland’s total greenhouse gas (GHG) emissions and compliance with European Union’s Effort Sharing Decision “EU 2020 Strategy” (Decision 406/2009/EC).

The EPA estimate that Ireland had total GHG emissions of 53.82 Mt CO<sub>2</sub>e in 2024. The data indicates that from 2021- 2024 Ireland has used 79% (186 Mt CO<sub>2</sub>e) of the 295 Mt CO<sub>2</sub>e Carbon Budget for the five-year period 2021-2025.

The sectorial emission ceilings for 2030 are published in the Climate Action Plan (2025) (CAP25). Electricity has a 75% reduction requirement and a 2030 emission ceiling of 3 Mt CO<sub>2</sub>e (carbon dioxide equivalent).

## 8.2 Impact Assessment

### 8.2.1 Do Nothing Scenario

In the Do Nothing scenario, the site will remain as per the baseline and will change in accordance with trends within the wider area (including influences from potential new developments in the surrounding area, changes in road traffic, etc).

It is likely that in the absence of the Proposed Project a development of a similar nature would occur in the future. Therefore, the predicted greenhouse gas emissions associated with the construction and operation phases are likely to occur regardless of the specific Proposed Project. Climate change is being driven by broader, long-term global trends in greenhouse gas concentrations, which will continue irrespective of any localised development. This assessment focuses on the contribution of the Proposed Project to the overall emissions and considers mitigation measures to minimise its climate impact.

The Proposed Project fulfils a key target of the CAP25 of “at least 2 GW” of new flexible gas plant, intended to produce a “more flexible energy system, reducing the strain on the power system, and ensuring that we maximise our renewables potential.” The Proposed Project will provide 0.325 GW or 0.334 GW of this capacity. In the Do Nothing scenario, where the Proposed Project does not go ahead, this capacity is not provided and Ireland’s ability to meet this CAP25 target as well as its trajectory to net zero by 2050 is impeded.



The effect of the Do Nothing scenario on climate is therefore considered direct, long-term, negative and significant.

## 8.2.2 Greenhouse Gas Assessment

Calculation of the GHG emissions associated with the construction, operation and decommissioning of the Proposed Project was calculated using the online Transport Infrastructure Ireland Carbon Assessment Tool and information provided by the design team. GHG emissions associated with the Proposed Project are predicted to be a small fraction of Ireland's national 2024 GHG emissions, the ETS and non-ETS 2030 targets and the Electricity, Industry, Transport and Waste sector 2030 emissions ceilings. The Proposed Project will incorporate some mitigation measures which will aim to reduce climate impacts during construction and once the Project is operational.

As per the TII 2022 PE-ENV-01104 guidance, the significance of the effect of GHG emissions on climate is assessed for the total GHG emissions across all Proposed Project stages, and is determined by two main factors - the extent to which the trajectory of GHG emissions from the project aligns with Ireland's GHG trajectory to net zero by 2050, and the level of mitigation taking place.

The Proposed Project is fully in line with national climate policy, as CAP25 specifically gives a key target of installing "at least 2 GW" of new flexible gas plant, intended to produce a *"more flexible energy system, reducing the strain on the power system, and ensuring that we maximise our renewables potential."* The Proposed Project will provide 0.325 GW or 0.334 GW of this capacity.

The estimated total GHG emissions, when annualised over the Proposed Project lifespan, are equivalent to 0.04% of Ireland's total GHG emissions in 2024, which represents a very small proportion of Ireland's national emissions and sectorial targets. Furthermore, flexible gas generation is provided for under current national policy, as detailed in Chapter 1, Volume 2 of the EIAR.

In accordance with the TII guidance and the EPA guidelines (EPA, 2022), the significance of effect of GHG emissions during the construction, operational and decommissioning phases which is **direct, long-term, negative** and **slight**, which is overall **not significant**.

## 8.2.3 Climate Change Risk Assessment

A Climate Change Risk Assessment (CCRA) was conducted to consider the vulnerability of the Proposed Project to climate change, as per the TII 2022 PE-ENV-01104 guidance. This involves an analysis of the sensitivity and exposure of the development to future climate hazards which together provide a measure of vulnerability. The hazards assessed included flooding (coastal, pluvial, fluvial); extreme heat; extreme cold; drought; extreme wind; lightning; hail; fog; wildfire; and landslides. The Proposed Project is predicted to have at most low vulnerabilities to the various climate hazards and therefore the effect of climate change on the Proposed Project is considered **direct, long-term, negative** and **imperceptible**, which is considered overall **not significant** in EIA terms with regard to the construction and operational phase.

Overall, no significant impacts to climate are predicted during the construction or operational phases of the Proposed Project.



## 8.3 Mitigation

### 8.3.1 Construction Phases

A number of best practice mitigation measures are proposed for the construction phase of the Proposed Project to ensure that impacts to climate are minimised. These mitigation measures include sourcing materials locally where feasible during the construction phase, determining material reuse and waste recycling opportunities and identifying and implementing lower carbon material choices and quantities during detailed design.

### 8.3.2 Operational Phase

There are no specific measures proposed to mitigate the GHG emissions of the operational phase of the proposed project.

In terms of climate change vulnerability, a number of measures have been adopted as part of the project design, primarily in terms of reducing risk to the project from climate change hazards. These have been discussed in detail previously in Chapter 8, Volume 2 of the EIAR, and summarised as follows:

- The design for the storm-water drainage for the proposed site is to take into consideration all other standards for drainage design;
- Suitable Sustainable Urban Drainage systems (SUDs) are to be used within the proposed site to reduce surface water runoff from the site where feasible and designed in accordance with the relevant standards; and
- High quality, durable building materials will be selected for the Proposed Project to reduce their sensitivity to extreme temperatures.

## 8.4 Residual Impact Assessment

The impact to climate as a result of a Proposed Project must be assessed as a whole for all phases. The Proposed Project will result in some impacts to climate through the release of GHGs. TII reference the Institute of Sustainability and Environmental Professionals (ISEP) GHG Guidance which states that the crux of assessing significance is “*not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050*”. The Proposed Project has proposed some best practice mitigation measures and is committing to reducing climate impacts where feasible. The Proposed Project is fully in line with national climate policy, as CAP25 specifically gives a key target of installing “at least 2 GW” of new flexible gas plant, intended to produce a “*more flexible energy system, reducing the strain on the power system, and ensuring that we maximise our renewables potential.*” The Proposed Project will provide 0.325 GW or 0.334 GW of this capacity. As per the TII and ISEP assessment criteria the residual effect of the Proposed Project in relation to GHG emissions is considered **direct, long-term, negative** and **slight**, which is overall **not significant** in EIA terms.

Design mitigation has been considered when assessing the vulnerability of the development to future climate change. In relation to climate change vulnerability, it has been assessed that there are no significant risks to the proposed Project as a result of climate change. The residual effect of climate change on the Proposed Project is considered **direct, long-term, negative** and **imperceptible**, which is overall **not significant** in EIA terms.



## 8.5 Monitoring

There is no monitoring required for the construction or operational phases.

## 8.6 Note on Potential for Future Emissions Reductions (for information)

The majority of the GHG emissions associated with the Proposed Project originate from the combustion of natural gas by the turbine during the operational phase.

While natural gas is the most likely fuel for the turbine at the time of this assessment, the turbine will also be capable of using biomethane as a fuel source in the future. Accordingly, these fuels are discussed below. However it should be noted that the Air Quality impact assessment (Chapter 7, Volume 2 of the EIAR), Climate impact assessment (Chapter 8, Volume 2 of the EIAR) and the EIAR have not relied on the following text, which is provided for information purposes only.

Biomethane meets the same technical standards as natural gas, and as such is fully compatible with existing gas infrastructure and installations. Biomethane is considered a zero GHG emissions fuel (once it is produced according to the Renewable Energy Directive's life cycle sustainability criteria) and its availability on the market is due to increase in the future, driven by Gas Networks Ireland's (GNI) strategy for decarbonisation *Pathway to a Net Zero Carbon Network* (GNI, 2024) and the *National Biomethane Strategy* (Government of Ireland, 2024d). GNI's strategy is to fully decarbonise its gas network by 2045, phasing out natural gas entirely and delivering biomethane and hydrogen in its stead.

The *National Biomethane Strategy* (Government of Ireland, 2024d) is Ireland's first major policy statement on biomethane and is an important milestone in the development of an indigenous sector. The strategy sets out twenty-five actions to be delivered in the coming years to enable the development of the sector and to achieve the government's target of 5.7 Terawatt hours (TWh) of indigenously produced biomethane by 2030. The publication of this strategy was coupled with the launch of grant aid towards development of the sector which is expected to drive expansion of the anaerobic digestion sector towards achieving the 2030 target. This target represents approx. 12% of projected networked gas.

Substantial progress on the decarbonisation of the national gas network via biomethane and hydrogen replacement of natural gas is considered highly likely during the lifespan of the Proposed Project, and it is therefore expected that the use of natural gas and the associated GHG emissions will reduce throughout the operational phase relative to the development's opening year.



# 9. Noise and Vibration

The Noise and Vibration Assessment is contained within Chapter 9 Noise and Vibration, Volume 2 of the EIAR.

## 9.1 Receiving Environment

The baseline noise environment has been established through environmental noise surveys conducted at the site in order to quantify the existing noise environment.

The surveys were conducted in accordance with ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise. Noise monitoring locations (2no. attended; 2no. unattended) are presented in Figure 9-1. Results are discussed in detail in Chapter 9 – Noise and Vibration, Volume 2 of the EIAR.



Figure 9-1 - Noise Monitoring Locations

## 9.2 Impact Assessment

### 9.2.1 Construction Phase

There is no published statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project. Local authorities or An Coimisiún Pleanála (ACP) normally



control construction activities by imposing limits on the hours of operation and/or applying noise limits for construction noise at noise-sensitive locations.

Reference has been made to BS 5228 2009+A1 2014 Code of practice for noise and vibration control on construction and open sites. Part 1 to set appropriate construction noise limits for the development site. Construction noise level at various setback distance had been calculated on this basis.

Noise levels associated with main site construction activities at the nearest sensitive properties are predicted to be below the relevant thresholds (i.e. for significant impact during the general construction phase), and will be short term in duration. Refer to Chapter 9, Volume 2 of the EIAR.

Standard controls (including restricted working hours, noise management measures) will be applied. The application of binding noise limits, hours of operation, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact are minimised.

The potential construction noise effects are **negative, not significant and short-term**.

For construction of underground cable, noise and vibration impact assessment conducted at the nearest sensitive properties along the route indicates that the impacts is **negative, not significant to moderate and temporary**.

## 9.2.2 Operational Phase

The primary sources of outward noise in the operational context are long term and will comprise plant noise from the proposed gas turbine.

Detailed computer-based noise modelling of the site shows that the noise levels of the subject site are within the noise criteria. Predicted operational noise levels therefore comply with applicable standards.

The effect is **Negative, Imperceptible to Slight to Moderate Impact and Long-term**.



# 10. Traffic and Transportation

This section summarises the current receiving environment in terms of existing road traffic and transportation characteristics and quantifies the associated baseline scenario whilst undertaking an assessment of the Proposed Project to identify its likely effects on the traffic environment for the proposed.

The assessment methodology for the traffic and transport impact is consistent with the Transport Infrastructure Ireland's (TII) Traffic and Transport Assessments Guidelines.

The assessment of Traffic and Transportation is contained within Chapter 10 Traffic and Transportation, Volume 2 of the EIAR.

## 10.1 Receiving Environment – Traffic & Transportation

The greenfield site in Pollnagroagh, Athenry is located approximately 18 km east of Galway City and 2 km west of Athenry. The Proposed Project site, with an area circa. 19.17 hectares, is positioned between the northern and eastern arms of the M6/M18 interchange. Access to the site will be provided via a newly proposed 1.15 km long access road connecting to the L3103, approximately 1 km east of the M17 motorway, as presented in Figure 1-1.

Baseline traffic data for the nearest local road, L3103, was obtained from an Automatic Traffic Counter (ATC) survey conducted 50 m east of the junction with Moanbaun on 13 February 2025.

Based on the data, the two-way traffic flow along the L3103 is summarised below. The peak hours identified were:

- AM Peak: 8 to 9 am (around 280 passenger car units (pcu))
- PM Peak: 5 to 6 pm (around 230 pcu)

It is noted that the baseline traffic conditions are likely to remain unchanged throughout the project timeline. This is based on the lack of background development on the surrounding road network.

## 10.2 Impact Assessment

### 10.2.1 Construction Phase

The construction period is the only period within which any perceptible impact is expected on the local transportation network. The construction impact is divided into two main components (note abnormal loads are discussed separately below):

- Additional construction trips onto the local road network (including staff, general deliveries and material import/spoil).
- Local Road Closures required due to the Underground Cable (UGC) installation.



### 10.2.1.1 Additional Construction Trips

For the construction of the Peaker Plant, it is anticipated that the majority of heavy vehicle trips will be associated with earthworks. It is estimated that 13,000 m<sup>3</sup> of earthworks material will be hauled during the construction period. Based on the existing network capacity, it was observed that the cumulative flow is well within the maximum capacity of Local Road L3103. Thus, the impact of the additional trips will be “Not Significant”. It should be noted that a worst-case scenario was assumed regarding the number of construction trips generated as they would most likely occur outside of network peak periods. Given that the majority of traffic will utilise the L3103, it is assumed that all roads in the area will be well within capacity.

### 10.2.1.2 Local Road Closures due to UGC installation

The UGC Grid Route installation works will follow along the roads Lisheenkyle East (L7108), L7109 and L3103). This installation will require two distinct closure instances, associated with the following construction activities:

1. Main Cable Construction (all works associated with installation of cable, backfilling and resurfacing trench)
2. Resurfacing (it is anticipated that all roads will require full width resurfacing in order to reinstate the road back to the original condition).

Road closure summaries are provided below and presented in Figure 10-1.

**Table 10-1 - Road closure summaries**

Construction Activity		Total Duration	L3103	Lisheenkyle East (L7108)	L7109
Main Construction	Cable	6 months	1 month	3 months	2 months
Resurfacing		4 months	3 weeks	2 months	1.5 months





### 10.2.1.2.1 Full Road Closures

Due to limited road width along Lisheenkyle East (L7108) and L7109 roads, full road closures will be required. A section of approximately 3km will be closed on both the roads, resulting in a diversion route of around 8km, which adds approximately 5km of extra travel.

While full closure is shown on these roads, only through-traffic will be impacted as residents will be able to access their properties from each side of the closure segments. This will be facilitated via limiting trench lengths to sequential 30 to 50m sections (shorter segments of between 2–5 m will be implemented in scenarios where adjacent properties create short segments between access points. This will ensure residents' entry and egress from one side of a property is maintained at all times. Closure segments will avoid local driveways in order to reduce impacts on local residents).

The proposed diversions will be as follows:

- Lisheenkyle East Road (L7108) Diversion Route: L7109 (via Lisheenkyle East (L7108) & L7109 junction) -> R339 (via L7109 road & R339 junction) -> L3103 Road (via R339 & L3103 Moor Road junction)
- L7109 Road: Along Lisheenkyle East Road (L7108) (Via Lisheenkyle East Road (L7108) & L7109 junction) -> L3103 road (via Lisheenkyle East Road (L7108) & L3103 junction) -> R339 (via R339 & L3103 Moor Road junction)

Overall, the impact of full road closures are considered to be negative, significant but short term and will be limited to local residents on the L7108 and L7109. All through-traffic will be diverted with adequate warning in order to reduce the diversions required.

### 10.2.1.2.2 Partial Road Closures

Partial road closures are anticipated on the L3103 where sufficient width is available for one-way traffic. Installation works will be carried out on one side of the road, while a minimum 2.5m wide carriageway will be maintained for traffic flow on the other side. Temporary traffic signals will be used to safely guide vehicles through the work zone. It is proposed that the UGC will be installed in 30m segments with no more than 50m excavated without the majority of the previous section being reinstated.

Overall, the impact of partial road closures are considered to be negative, moderate and short term.

## 10.2.2 Operational Phase

During the operational phase of the Proposed Project, minimal traffic is anticipated to be generated. This is largely due to the characteristics of the project (no site personnel and remote operation). The only trips associated with the entire project during operation are as follows:

1. AGI Facility: Bi-weekly maintenance which will be serviced by a single vehicle (most likely a van).
2. Cashla Peaker Plant:
  - a. Bi-weekly maintenance which will be serviced by a single vehicle (most likely a van)
  - b. Single low sulphur diesel tanker (sporadic – low sulphur diesel is only required as a backup)
  - c. Single tanker every 5 years in order to remove wastewater from site

Due to the nature of the project, these trips are likely to be sporadic and are considered imperceptible. Overall operational traffic associated with the proposed project will be limited and sporadic and will not give rise to any measurable impact on the local road network.



## 10.2.3 Decommissioning Phase

During the decommissioning phase of the Proposed Project, minimal traffic is anticipated to be generated in comparison to the construction phase. This is based on the assumption that the cable will remain within the roads after decommissioning and will not be removed.

As a result, the decommissioning phase was not assessed in terms of traffic based on the anticipated lack of trip generation.

## 10.2.4 Exceptional Abnormal Loads

An Exceptional Abnormal Load (EAL) is a vehicle that does not conform to the Construction & Use (C&U) Regulations and is heavier than 180 tonnes. There are 3no. EALs scheduled for delivery to the Proposed Peaker Plant Site that require special transport permits due to their size and weight. The generator, with an estimated net weight of approximately 380 tonnes, is the heaviest item and will be transported using a girder truck by a specialist haulage contractor. The route for all EALs is anticipated to originate at the Port of Galway via Lough Atalia Rd (R339) before connecting directly onto the N6 (which later becomes the M6). It runs on the M6 until Exit 17 (R348) at Athenry, before turning onto Ballygarraun South Rd. From Ballygarraun South Rd, the route runs onto the L3103 off of which access to the proposed main project site is provided. The route is approximately 25.5km in length.

The exceptional abnormal loads assessment consisted of 2 no. separate components namely the following.

### 10.2.4.1 Structural

An Abnormal Loads Assessment was undertaken to assess the feasibility of transporting three large components, up to 350 tonnes each, from Galway Port to the Cashla Peaker Plant via two routes. The assessment focused on nine critical structures along these routes, comparing the effects of Exceptional Abnormal Load (EAL) vehicles against original design loads in accordance with TII standards and Eurocode. Using conservative assumptions and finite element modelling, the analysis concluded that all structures on the preferred route can safely accommodate the proposed EAL configuration under controlled conditions, while the alternative route is unsuitable due to overstress at Castlelambert Overbridge.

### 10.2.4.2 Pavement Analysis

An assessment was undertaken to determine the structural adequacy of the existing road pavement on the haulage routes along which the exceptional load associated with the project will be transported.

Pavement investigations were carried out to determine the structural capacity of the existing road pavements on the proposed haulage routes, and determine their suitability to accommodate the traffic loading associated with the proposed delivery of equipment to the project site.

It is concluded that the pavement structures along the proposed haulage routes possess adequate residual capacity to withstand the anticipated loading from the heavy lifter transporter passes.

The cumulative loading demand (inclusive of the existing traffic volumes and the expected 3 loads per pass and 4 passes of the HLT) is substantially lower than the residual pavement life determined for each section of the route. As such, no pavement strengthening works are anticipated to be required to facilitate the transport movement, provided that conventional traffic management and operational controls are maintained during the haulage activity.



## 10.3 Traffic Management

A Construction Traffic Management Plan (CTMP) was prepared as part of this planning application (presented in Appendix 2-11, Volume 3 of the EIAR). The CTMP was developed with differing levels of detail for specific components of the project as outlined below:

1. **Cashla Peaker Plant:** The traffic management plan for the Proposed Peaker Plant was developed to the level of a Construction Stage Traffic Management Plan (CSTMP). The purpose of this plan is to ensure feasibility of construction. This plan is then further developed into a full CTMP, a statutory requirement, by the contractor prior to construction.
2. **UGC:** A CTMP was developed in full detail for the UGC prior to submitting the planning application (refer to Appendix 2-11, Volume 3 of the EIAR).

The Construction Stage Traffic Management Plan shall be termed an “Ongoing Document” such that any changes to construction programme, operations or unforeseen issues can be incorporated into the Traffic Management Plan at any stage throughout the proposed works as deemed necessary by the Employer, their agents or relevant authorities. This will include any conditions attached to the grant of permission. The principal contractor(s) shall also agree and implement monitoring measures to monitor the effectiveness of the Construction Traffic Management Plan. Details of monitoring measures are provided later in the document.

On finalisation of the Construction Stage Traffic Management Plan, the contractor shall adopt the plan and associated monitoring measures. The Construction Stage Traffic Management plan shall address the following issues:

- Car Parking;
- Site Access & Egress;
- Traffic Management Signage;
- Routing of Construction Traffic;
- Timings of Material Deliveries to Site;
- Traffic Management Speed Limits;
- Road Cleaning; and
- Enforcement of Traffic Management Plan

## 10.4 Overall Impact Summary

With the exception of the road closures associated with the cable installation, which will be short term, no significant impacts are anticipated for the Proposed Project during any phase, including cumulative and residual impacts.

While short term significant impacts are expected during the construction phase, significant mitigation measures will be implemented in order to reduce the overall impact.

The cumulative impact assessment (as detailed further in Section 16 Cumulative Impacts) indicates that the Proposed Project and a proposed development, referred to as Gannow Windfarm (Ref: 25/61412; Refused, currently under appeal to An Coimisiún Pleanála) will result in **short-term, significant impacts** on the local road network, specifically along L-7108 and L-7109, due to full road closures during grid connection works. These closures will lead to traffic diversions and increased travel distances for local residents.

The cumulative construction activities will result in:



- Main Cable Construction: Up to 7 months combined impact across affected roads.
- Resurfacing: Approximately 4 months, with localised effects.

These impacts are considered **negative and significant but temporary**, confined to the construction phase and primarily affecting local traffic and residents.

Comprehensive traffic management plans, phased construction scheduling, and clear diversion signage are proposed to reduce inconvenience and maintain safety.

While short-term significant impacts are expected during the construction phase, significant mitigation measures will be implemented to reduce the overall impact. **No other significant impacts are anticipated for the Proposed Project during any other phase.**



# 11. Land, Soils and Geology

The Land, Soils and Geology chapter (Chapter 11, Volume 2 of the EIAR) outlines the assessment of potential impacts to:

- Land and soil resources and fertile land suitable for agriculture (including land take);
- Contamination; and
- Geological heritage sites and mineral occurrences.

Potential effects of the Proposed Project during construction (pre-mitigation), with respect to soils and geology, are expected to include:

- Disturbance of the soil resource and loss of fertile land;
- Impacts to karst bedrock potentially present beneath the site, and
- Effects associated with potentially existing ground contamination and potential for new land contamination arising from construction activities.

The assessment of Land, Soils and Geology is contained within Chapter 11 Land, Soils and Geology, Volume 2 of the EIAR.

## 11.1 Receiving Environment

A review of the historical development of the site records that the site is located in a generally rural area within limited industrial / commercial historical development and no significant potential sources of contamination identified. There are no geological heritage sites, mineral occurrences or known quarries recorded on-site or within the study area, therefore potential impacts to geology are likely to be limited during construction.

Extensive site assessment has been undertaken across the proposed Peaker Plant site, comprising site walkover surveys, geophysical surveys, and intrusive geotechnical investigation. The scope of the ground investigation was designed by AtkinsRealis geotechnical and environmental teams to ensure that suitable geo-environmental and engineering data was obtained for the Proposed Project (preliminary design stage), taking account of the receiving environment (specifically the underlying karst geology), proposed initial engineering design, and baseline monitoring and environmental data requirements.

## 11.2 Impact Assessment

The impact on land take is likely to have a negative slight impact on the environment during construction as there is no mitigation for permanent land take of fertile soils. However, the Proposed Project is immediately adjacent to the transport connection of the M17, and this change is consistent with existing and emerging trends.

A robust engineering design has been developed for the project, informed by the site specific geological and hydrogeological conditions, including the potential presence of onsite subsurface karst geology. Accordingly, for the purpose of this assessment it is conservatively assumed that karst conditions are present within the proposed project site.

Foundation solutions, as detailed further within Chapter 11 Land Soils and Geology, Volume 2 of the EIAR, present the engineering solutions that will respond to the presence of karst and at construction stage. The robust karst protocols identified will be implemented to control and respond to any karst features encountered. These

engineering solutions will ensure that there will be no significant impact to the receiving land, soils and geology environment via. risk to foundation design, ground collapse, or structural failure.

Similarly, there will be no potential significant environmental impacts to the receiving land, soils and geology environment, during the operational phase via karst geology beneath the project site. Extensive engineering design solutions (including secure onsite containment (fuel, waste water, contaminated storm water / firewater run-off), and offsite disposal of all associated waste streams) as detailed further within Chapter 11 Land Soils and Geology, Volume 2 of the EIAR, have been developed in response to assumed karst conditions present across the project site.

These solutions will ensure that there will be no discharge of contaminated water or potentially contaminated water to ground beneath the project site during the operational phase.

## 11.2.1 Construction phase

During the construction phase the impact to land contamination, and overall soils and geology is likely to have a **negative imperceptible** impact resulting in **no significant effects**.

## 11.2.2 Operational phase

During the operational phase, there is potential for low sulphur diesel fuel spills/leaks during operation of the Peaker Plant which may migrate in soils and via preferential pathways, such as below ground service ducts and channels. **The proposed design has been developed to ensure that any potential risk of contamination to the receiving environment is negligible.** Pollution prevention measures incorporated within the design will mitigate the risk of ground contamination. Consequently, land contamination is likely to have a **negative imperceptible impact** resulting in **no significant effects**.



# 12. Water

The Water chapter of the EIAR addresses the potential impacts of the Proposed Development on the surrounding water environment, inclusive of: hydrology, flood risk, hydro-ecology, hydrogeology and drainage. The findings of this assessment are summarised below.

The assessment of Water is contained within Chapter 12 Water, Volume 2 of the EIAR, as well as mitigation measures which will be implemented during the construction, operational and decommissioning phases.

## 12.1 Receiving Environment

There are no identified surface water bodies within 2 km of the site (the assessment area) and therefore no perceived linkages or risks.

The bedrock aquifer beneath the proposed site is designated as a Regionally Important Aquifer. There is potential for Karst formations at the site. Groundwater quality at the site is good. There are no public water supply abstractions in the area, but six private abstractions for agricultural and domestic purposes exist.

Part of the development is underlain by the Galway Bay Galway Bay Groundwater Dependent Terrestrial Ecosystem (GWDTE), which is connected to a Special Area of Conservation (SAC).

There is no evidence of risk for pluvial or fluvial flooding within the vicinity of the site.

## 12.2 Impact Assessment

### 12.2.1 Construction phase

Surface water impacts will be negligible as no identified surface water bodies are present on site.

**Groundwater and Groundwater Dependent Terrestrial Ecosystems** - Construction is primarily above groundwater level (therefore there is no significant interaction). Impacts will be **negligible** with best practice and mitigations (i.e. bespoke risk assessments as required). Regular checks and maintenance of the Proposed Project will be implemented as per Chapter 2, Volume 2 of the EIAR. Groundwater monitoring may be required pending completion of a Detailed Piling Risk Assessment and (if required) Hydrogeological Assessment.

**Flood Risk** – No flood risk is present on site so potential impacts will be **negligible**.

### 12.2.2 Operational phase

Engineering design solutions have been developed in response to karst conditions in the vicinity of the proposed peaker plant site, to ensure that any potential risk of contamination to the receiving land soils and geology environmental, and water (groundwater) environment is negligible. Pollution prevention measures, such as engineered drainage, double bunded tanks, hardstanding and designated waste storage incorporated within the design will mitigate the risk of ground contamination. Further details of design mitigation measures are provided in Chapter 2 Project Description, and Chapter 11 Land Soils and Geology, Volume 2 of the EIAR.

Surface water impacts will be **negligible** as no surface water bodies are present on site.



**Groundwater and Groundwater Dependent Terrestrial Ecosystems** – The Proposed Project is not likely to reduce infiltration, though there is a potential for pollution from general power plant activities to eventually reach groundwater. Impacts will be **negligible** with mitigation such as Sustainable Drainage Systems, Engineering design solutions, and good construction practice (to prevent operational leakages).

**Flood Risk** – No flood risk is present on site so potential impacts will be **negligible**.

Any impacts related to the decommissioning of the plant are considered to be mitigated to **negligible** if undertaken with prevailing best practice.

Cumulative impacts with other developments in the surrounding area are considered to be **negligible**, as detailed further in Section 16.



# 13. Cultural Heritage

## 13.1 Introduction

Chapter 13, Volume 2 of the EIAR provides an assessment of the potential effects of the Proposed Project on the Cultural Heritage. Cultural heritage (CH) includes artefacts, monuments, groups of buildings, sites, and museums that have a diversity of values including symbolic, historic, artistic, aesthetic, ethnological or anthropological, scientific and social significance. It includes tangible heritage (movable, immobile and underwater), intangible cultural heritage (ICH) embedded into cultural, and natural heritage artefacts, sites or monuments. This assessment was based on desk-based research, field survey, preceding geophysical survey and archaeological test excavation. The scope of the study area comprised sites within 2 km of the Proposed Peaker Plant site and within 250 m of the proposed grid connection.

The assessment of Cultural Heritage is contained within Chapter 13 Cultural Heritage, Volume 2 of the EIAR.

## 13.2 Archaeological Assessment

This archaeological assessment has identified 70 sites of archaeological, and/or cultural heritage significance within the study area. These comprise 28 sites listed in Record of Monument and Places (RMPs) and eight sites listed in the Sites and Monument Record (SMRs). None of these monuments are located within the proposed application boundary of the Peaker Plant. The proposed 220kV Underground Cable (UGC) crosses the Zone of Notification for two RMPs, a castle (CH019/ GA084-096001-) and an earthwork (CH020/ GA084-096002-) located adjacent to the north.

There is a single Protected Structure (CH037/ RPS No. RPS. 130), which is also listed on the National Inventory of Architectural Heritage (NIAH) registrations register (Reg. No. 30408407). There are no Architectural Conservation Areas (ACA) within the study area but the closest ACA is Athenry Town Centre located c.2.5 km east. The excavation database produced nine previous excavations (CH047–CH055) within the study area. Examination of the cartographic record identified five undesignated cultural heritage sites identified within the application boundary of the proposed UGC. The Proposed Peaker Plant and UGC crosses a single townland boundary (CH046) while the proposed cable route crossed an additional eight townland boundaries (CH062–CH069). There is a single area of archaeological potential (CH056) based on natural features identified within the proposed development boundary of the Peaker Plant.

### 13.2.1 Geophysical Survey

The Proposed Peaker Plant was the subject of a preceding geophysical survey which identified nine areas/features of archaeological potential, CH047–CH055. This included possible pits, burnt spreads and imported material. Concerns regarding potential direct, negative effects on the archaeology during construction phase were addressed by the preceding test excavation by Rubicon Archaeology Limited under Licence no. 25E0549 (CH070). The test excavation did not find anything of archaeological significance within the footprint of the Proposed Peaker Plant. It also showed that none of the nine areas/features of archaeological potential, CH047–CH055, were of archaeological significance. Instead, they corresponded to features associated with land clearance (CH047–CH049, CH051–CH055) and natural limestone bedrock (CH050). In addition, the test excavation did not find any additional features of archaeological significance. Therefore, as no direct effects are predicted, there are no residual effects for this part of the proposed development.



## 13.2.2 Landscape and Visual Impact Assessment

The assessment also include a Landscape Visual and Impact Assessment (LVIA), using the visual buffer Zone of Theoretical Visibility produced by Eamonn Byrne Landscape Architects Ltd. Based on a review of this assessment, it is predicted that the Proposed Peaker Plant will have no visual effect on the view or setting of the historic town centre. In addition, the LVIA found that the Peaker Plant will be visible from 14 CH sites (CH003–CH011, CH014, CH021, CH023, CH026, CH035–CH036). However, based on distance, site setting extent of visibility and the level of significance, screening as a mitigation was not recommended, as it was not determined to be of benefit.

The assessment identified that the proposed new site entrance and access road to the Peaker Plant will have a direct effect on CH057, which is a collection of vernacular structures depicted on the 6-inch OS map. This section of the greenfield was not the subject of the preceding test excavation, and there is the potential for the unknown subsurface remains of the structure. During the assessment, it was found that the proposed UGC will have a direct, physical effect on the unknown subsurface remains of CH059. The assessment also determined that the proposed UGC will have an indirect effect on CH019 and CH020, whose zones of notification it crosses.

## 13.3 Mitigation Measures

Proposed mitigation measures include monitoring by a suitably qualified archaeologist under licence to the National Monuments Service Section of the Department of Housing, Local Government and Heritage. The suitably qualified archaeologist will monitor subsurface groundworks undertaken: within any zones of notification; where undesignated cultural heritage sites are targeted; and the footprint of the proposed UGC in areas not previously disturbed by services, road or other modern construction.

The implementation of mitigation measures for the proposed grid connection will ensure that the residual effect is **slight and/or moderate**, as well as **slight and/or negligible**.

Subject to the implementation of the appropriate archaeological mitigation measures during the construction phase of the project, **no significant residual impacts** on archaeological, architectural and cultural heritage are predicted.



# 14. Material Assets

The Material Assets chapter assesses the infrastructure and services that support the Cashla Peaker Plant, including utilities, waste management, and built services. It focuses on how the Proposed Project will interact with existing infrastructure and outlines the measures to protect these assets during construction and operation.

The assessment of Material Assets is contained within Chapter 14 Material Assets, Volume 2 of the EIAR.

## 14.1 Impact Assessment

### 14.1.1 Built Services

The site is currently undeveloped and lacks public utilities. The project will introduce new infrastructure (which will be installed, commissioned and operated in accordance with all relevant statutory and stakeholder requirements) including:

**Water Supply:** A new watermain will be installed from Athenry. Uisce Éireann has confirmed this connection is feasible.

**Foul Drainage:** A small wastewater treatment system will be installed to manage domestic wastewater from staff facilities. Domestic wastewater will be stored and removed weekly by tanker.

**Stormwater Drainage:** Rainwater will be managed using sustainable drainage systems (SuDS), including filter drains and an infiltration pond. These systems are designed to handle extreme weather events.

**Electricity and Telecoms:** The site will connect to ESB and eir networks. Existing services in the area have been mapped and will be protected during construction.

**Gas Supply:** A high-pressure gas pipeline runs through the site. All works near this pipeline will follow strict safety protocols.

**Lighting:** Outdoor lighting will be installed in line with environmental guidelines, including measures to protect local bat populations.

### 14.1.2 Waste Management

Waste will be carefully managed during construction, operation and decommissioning.

#### 14.1.2.1 Construction Waste / Decommissioning Waste

During this phase waste will be generated which includes waste soil, building materials, packaging, and office waste. All waste streams will be managed, segregated and sent to licensed facilities for recycling or disposal. Decommissioning works will be carried out under IE Licence requirements and in accordance with an Environmental Liabilities Risk Assessment (ELRA) and/or a Closure, Restoration and Aftercare Management Plan (CRAMP) for the EPA licenced facility.



### 14.1.2.2 Operational Waste

During this phase waste will be generated which includes office waste, wastewater from turbine maintenance, and water treatment by-products. All waste will be stored safely and removed regularly by licensed contractors.

## 14.2 Mitigation Measures

To protect existing infrastructure and ensure safe operations:

- Surveys will be conducted before construction to confirm the presence of all underground services at that time.
- A Construction Environmental Management Plan (CEMP) will be implemented during the construction works, which will be developed from the CEMP prepared for this planning submission (refer to Appendix 2-10, Volume 3 of the EIAR).
- All utility works will follow the standards of relevant authorities (e.g., Uisce Éireann, ESB).
- Lighting and drainage systems will be designed to minimise potential environmental impact.

## 14.3 Residual Impacts

Taking account of the proposed mitigation measures for Material Assets, specifically built services the residual effects of the Proposed Project will be **short-term** and **not significant** during the construction phase, and **long-term** and **not significant** during the operational phase. There will be **no likely significant** residual effects associated with built services.

Taking account of the proposed mitigation measures for Material Assets, specifically waste management, the residual effects of the Proposed Project will be **short-term and imperceptible** during the construction phase, **long-term and imperceptible** during the operational phase and **short-term and imperceptible** during the decommissioning phase. There will be **no likely significant** residual effects associated with waste management and / or generation.



# 15. Major Accidents and Disasters

## 15.1 Introduction

This chapter assesses the impacts of major accidents and disasters (MA&D) associated with the Proposed Project. It identifies and evaluates events with the potential to cause significant adverse effects on human health, the environment, or property, during operation, construction and/or decommissioning phases.

The assessment of major accidents and disasters is contained within Chapter 15 Major Accidents and Disasters, Volume 2 of the EIAR.

## 15.2 Receiving Environment

A description of the physical characteristics and context of the application site and the surrounding/wider area is presented in Chapter 2 Project Description Control of Major Accident Hazards of this NTS.

### 15.2.1 Control of Major Accident Hazards (COMAH)

A COMAH assessment has been prepared for the proposed Peaker plant and is presented in Appendix 15-1, Volume 3 of the EIAR.

The Seveso III Directive<sup>4</sup> requires Member States to apply land-use or other relevant policies to ensure that appropriate distances are maintained between residential areas, areas of substantial public use and the environment, including areas of particular natural interest and sensitivity and hazardous establishments.

The purpose of the COMAH Regulations<sup>5</sup> is to transpose the Seveso Directive into Irish law and lay down rules for the prevention of major accidents involving dangerous substances, and to seek to limit as far as possible the consequences for human health and the environment of such accidents. The overall objective is to provide a high level of protection in a consistent and effective manner.

The Health and Safety Authority (HSA) is responsible for ensuring that the impacts of facilities which fall within the remit of this legislation are taken into account with respect to land use planning. This is achieved through the provision of technical advice to planning authorities.

The Proposed Project will be a Lower tier COMAH site and will be subject to COMAH Regulations, as detailed further in the COMAH report, Appendix 15-1, Volume 3 of the EIAR.

The Proposed Project site is not located within the consultation zones of any Seveso establishment; therefore, there are no constraints to the Proposed Project at this location from nearby Seveso establishments.

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<sup>4</sup> Seveso III Directive (2012/18/EU)

<sup>5</sup> Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations (S.I. 209 of 2015) (COMAH Regulations)



## 15.2.2 Seismic Activity

Ireland has low seismicity, no earthquakes have been recorded nearby, and any seismic impact on the Proposed Project would be insignificant. Seismic risk near the Proposed Project is negligible.

## 15.2.3 Landslides

Ireland has generally low landslide susceptibility (higher risk only in unconsolidated coastal cliffs and disturbed upland peat), the site and surroundings are of low susceptibility, and any landslide impact would be not significant. Landslide risk for the Proposed Project is negligible.

## 15.2.4 Flood Risk

The site-specific Flood Risk Assessment found the Proposed Project is not at significant flood risk: no historic flooding was identified, no alluvium deposits were present on-site, and OPW mapping places the site in Flood Zone C.

# 15.3 Impact Assessment

## 15.3.1 Construction Phase

- General construction activities will include ground preparation, excavation, and construction of structures. These activities will require the use of vehicles and tools. The hazards associated with activities include the potential for vehicle impact, particularly during reversing and vehicle overturning. The controls around this work will be managed by appropriate risk assessments to control the risks to people, the environment and also to the existing operational areas.
- A site-specific Construction Environmental Management Plan (CEMP) and a Health and Safety Plan will be produced by the Construction Contractor, covering the construction and commissioning of the Proposed Project. The CEMP will be prepared to ensure compliance with relevant health and safety legislation including the Safety, Health and Welfare at Work Act (2005), and will incorporate all of the requirements as set out in the CEMP for the proposed project (Appendix 2-10, Volume 3 of the EIAR).
- The following risks of major accidents or disasters associated with the Proposed Project have been identified for further assessment:
  - Extreme heat or cold weather resulting in structural damage and/or pollution to soils, groundwater or surface waters
  - Storm events (including lightning) resulting in structural damage and/or pollution to groundwater and surface waters
  - Flooding
  - Flash fire, Explosion or Jet fire following compressed gas cylinder release (e.g. acetylene for welding)
  - Flash fire, Explosion or Jet fire following natural gas release

There are no likely impacts on the project to off-site receptors during the construction phase in relation to major accidents and disasters.



## 15.3.2 Operational Phase

- The following potential risks of major accidents or disasters in connection with the Proposed Project have been assessed:
  - Release of Natural Gas;
  - Extreme heat or cold weather resulting in structural damage and/or pollution to soils, groundwater, or surface waters;
  - Storm events resulting in structural damage and/or pollution to groundwater and surface waters;
  - Flooding; and
  - Release of Propane.

There are no likely impacts on the project or to off-site receptors during the operation phase in relation to major accidents and disasters.

## 15.4 Mitigation And Residual Effects (Post-Mitigation)

The Proposed Project has been designed in line with good industry practice, and, as such, mitigation against the risk of major accidents and/or disasters is embedded through the design and in accordance with planning and legislative requirements. As **no likely significant effects** were identified, no additional mitigation measures are proposed.

The residual effects are the final predicted or intended effects which occur after the proposed mitigation measures have been implemented. As **no likely significant effects** were identified, there is no potential for residual effects.



# 16. Cumulative Impacts

This Chapter assesses the potential for the Proposed Project to act in combination with plans and projects in the vicinity to result in cumulative impacts on the environment. Each of the technical chapters completed as part of the EIAR submitted along with this planning application have considered the potential for cumulative impacts with plans and projects in the vicinity of the Site which are included in this chapter, and presented in full in Chapter 16, Volume 2 of the EIAR.

Cumulative impacts are defined as *'the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects'* (EPA, 2022). All proposed and permitted projects and plans in the immediate environs, approved by Galway County Council or An Coimisiún Pleanála (ACP) within the last 5 years, have been reviewed.

An initial review of plans and projects in the general vicinity (2km radius) of the Proposed Project was conducted<sup>6</sup>. These plans and projects were reviewed individually and those deemed to have already been constructed, were of a small scale in nature (i.e. extension works, or property retention works) or were considered to be of a reasonable distance from the Proposed Project were not considered further in this assessment.

A short list of 42no. proposed and permitted projects and plans were reviewed in further detail, in terms of project location, nature of development and (if relevant) supporting planning documents (refer to Appendix 16-1, Volume 3 of this EIAR, Short-List of Relevant Projects Assessed), by each individual specialist with regard to cumulative impacts as part of the technical assessments undertaken for this EIAR. The results of the cumulative impact assessment for each environmental topic are presented in this section.

One of these projects (Ref.: 2561412; Applicant: Gannow Ltd.), a proposed Windfarm (8no. wind turbines) and 38kV Grid infrastructure (including substation and underground grid connection), in Attymon, Co.Galway, includes a 2.2km section of road that is common to both the proposed Gannow Wind Farm, and the Cashla Peaker Project. A technical assessment (TLI, 2026) has been undertaken in relation to potential cumulative impacts (refer to Appendix 16-2, Volume 3 of the EIAR). The advice of TLI technical experts is that the Gannow connection at the existing Cashla substation would not be viable, regardless of whether the OCGT (Proposed Project) also connects there, as the substation currently only accepts transmission connections not distribution connections. However, taking a precautionary approach, the proposed Gannow development has still been cumulatively assessed as part of the EIAR.

The proposed Gannow wind development (Ref: 2561412) has been refused by Galway County Council (albeit this decision has been appealed to An Coimisiún Pleanála (ACP)). The advice of TLI technical experts is that the Gannow connection at the existing Cashla substation would not be viable, regardless of whether the OCGT (Proposed Project) also connects there, as the substation currently only accepts transmission connections not distribution connections.

However, taking a precautionary approach, the proposed Gannow development has still been cumulatively assessed as part of the EIAR, as summarised below. It should be noted that while both projects do interact, each project can and will be delivered as a standalone project. The cumulative assessment has been carried out on the basis of the assumption that construction phases would overlap, based on available information.

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<sup>6</sup> Note: Latest review carried out February 2026.



Details of the technical cumulative impact assessment (TLI, 2026) are presented in Appendix 16-2, Volume 3 of the EIAR.

## 16.1 Population & Human Health

The Proposed Project is not within the area covered by the Athenry Local Area Plan 2024-2030 and is 1 km from any land zoned within the Plan. Cumulative effects with this Plan are therefore not anticipated.

Following a review of Planning Applications in the local area, the Population and Human Health assessment has not identified potential cumulative effects above and beyond what has been identified in respective technical chapters.

It is to be noted that interactions with other critical infrastructure such as water supply are dealt with in relevant chapters of the Volume 2 of the EIAR and form material consideration in construction management plans. All work will be carried out in accordance with appropriate safety guidance and legislative requirements and that safety on the strategic road network will be maintained. Such considerations apply for the project in isolation and in combination with any other projects.

## 16.2 Biodiversity

A search of Galway County Council planning and ACP planning applications has been undertaken for applications submitted within the last 5 years within 2km of the Proposed Project. Near the proposed works, projects that have been granted planning permission include retention of existing developments, renewable energy projects, agricultural developments, typical extensions to domestic dwellings or the construction of new domestic dwellings. Regarding potential impacts to water quality, these projects will have to comply with the EPA's Code of Practice for Domestic Wastewater Treatment Systems (EPA, 2021). These developments have conditions attached to their planning permission relating to sustainable development, such as siting of septic tanks, foul surface water and effluent drainage facilities, and clean surface water run-off drainage facilities. Therefore, it is not anticipated that the developments that have been granted permission will have any significant effects in combination with the Proposed Project.

In summary, there are **no cumulative impacts** between the Proposed Project and any nearby planning applications. No significant adverse cumulative impacts will occur.

## 16.3 Landscape and Visual

The following developments have been identified in consideration of cumulative landscape and visual effects with other projects.

### 16.3.1 Proposed telecommunications lattice tower

A 30m tall lattice telecommunications mast is proposed on land in close proximity to the south east of the proposed main project site and forms a separate planning application (Galway County Council, Planning Reference 2561637).



Although the mast would represent an additional vertical element within the local landscape, it would be of a slender form and similar height compared with some of the Proposed Project structures in the proposed main project site.

From certain viewpoints in the immediate vicinity (e.g. along sections of the M6 and M18 corridors and local roads), the mast and the Proposed Project at the proposed main project site would be visible together. In these cases, the mast would introduce a slight additional visual focus and would marginally increase the overall perception of built development within the view. The **cumulative visual effect** is therefore judged to be **slight adverse**, reflecting the small scale and limited extent of additional change. At greater distances, the mast would be screened by a combination intervening topography and vegetation or would be perceived as a minor, recessive feature alongside the proposed main project site infrastructure.

Due to its slender form and limited scale, the mast would not materially change the overall landscape character or key elements of the landscape, which would remain influenced by the surrounding motorway network, pylons, topography, vegetation, and the proposed main project site structures. Therefore, the cumulative effect on the landscape is assessed as **negligible adverse, and is not considered significant**.

## 16.3.2 Proposed Gannow Windfarm

The proposed windfarm comprising 8 turbines with a maximum tip height of 185m is located approximately 13 km from the proposed main project site. At this distance, it is judged that the turbines may be perceptible as distant vertical elements in some views, particularly from elevated vantage points. The proposed underground electrical cable connection associated with the windfarm would follow the local road network but would be entirely underground once constructed and would not contribute to any visual effects.

From a visual perspective, the turbines would only be apparent in limited distant views, and where visible, they would appear relatively small in scale compared with the foreground and mid-ground elements of Proposed Project structures in the proposed main project site. Therefore, the cumulative visual effect of the power plant and windfarm is judged to be **negligible to slight adverse**, reflecting minimal perceptibility and limited interaction within shared views.

From a landscape perspective, the addition of the distant windfarm does not materially alter the character of the landscape surrounding the proposed main project site development. Accordingly, the cumulative landscape effect is assessed as **negligible to slight adverse and not significant**.

## 16.4 Air Quality

### 16.4.1 Construction Phase

In combination, the Proposed Project and considered permitted developments will not have a significant effect on air quality due to the required application of dust mitigation measures for each development. The predicted cumulative impacts on air quality associated with the construction phase of the Proposed Project is **short-term, direct, negative and not significant**.

### 16.4.2 Operational Phase

There are no proposed, permitted developments or EPA licenced facilities within 1 km of the Proposed Project with the potential for significant cumulative effects due to combustion emissions (i.e. combustion plant that



would require registration under the Medium Combustion Plant Regulations or that would require regulation under an IE Licence). No significant adverse cumulative impacts will occur.

### 16.4.3 Decommissioning Phase

In combination, the Proposed Project and future permitted developments are unlikely to have a significant effect on air quality due to the required application of dust mitigation measures for each development. The predicted cumulative impacts on air quality associated with the decommissioning phase of the Proposed Project is **short-term, direct, negative and not significant**.

## 16.5 Climate

The cumulative effect of the Proposed Project in relation to GHG emissions is considered **direct, long-term, negative and slight**, which is overall **not significant** in EIA terms.

## 16.6 Noise & Vibration

The only development of scale, which can potentially give rise to the overall noise levels at the receptors, is the proposed datacentre development (GCC Ref. 211047, Appendix 16-1, Volume 3 of the EIAR). Due to the distance of the Proposed Project from the nearest sensitive receptors, operational noise levels are low and therefore cumulative levels will not be affected.

The proposed Gannow windfarm (Ref. 2561412), comprising up to 8 wind turbines, as previously detailed, will be approximately 13 km from the Proposed Project and significant noise contribution to the receptors for the Proposed Project will not occur during the operation phase. There is therefore no potential for any cumulative noise effect associated with the Proposed Project.

During the construction phase of the windfarm, its construction program will be scheduled such that there is no concurrent activities with the Proposed Project and there will be no cumulative effect during construction phase. In the unlikely event that the underground cable construction associated with the windfarm had to be constructed alongside the Proposed Project, the cumulative effect for underground cable construction remains to be negative, not significant to slight to moderate and temporary.

Permission for a telecoms mast has also been granted (Ref. 2561637) adjacent to the Proposed Project, as previously noted. It is not likely that operation of the telecoms mast will generate significant noise to the receptors during its operation and construction of the telecoms mast will be scheduled such that there is no concurrent activities with the Proposed Project. Therefore, cumulative impact to the Proposed Project is **not likely**.

**No cumulation noise or vibration effects will result** from other developments assessed during the cumulative impact assessment. No significant adverse cumulative impacts will occur.

## 16.7 Traffic

During the operational phase, cumulative impacts were discounted to due to the **imperceptible** impact on the transport network.



During the construction phase, the projects were reviewed in the context of overall traffic generation and potential impact of roadworks. In terms of traffic generation, none of these project applications are deemed to be of a similar scale to the Proposed Project and are accounted for in background traffic growth.

The only cumulative impact anticipated to be associated with the project is the Gannow Windfarm (25/61412) which shares a grid connection route on the L-7108 and L-7109, which is the same road identified for the grid connection in this Proposed Project.

Prior to the commencement of the construction phase, the contractor will produce an updated Construction Traffic management Plan (CTMP) which will align with the CTMP provided with this application (refer to Appendix 2-11, Volume 3 of the EIAR), updated to reflect any conditions imposed as part of any planning permission. The CTMP is a statutory requirement which focuses on mitigating the impacts of traffic on the surrounding environment. The contractor will produce the updated plan in consultation with the local council as well as suppliers and sub-contractors. Strategies to mitigate transport-related impacts during the proposed project construction phase are presented in Chapter 10 Traffic and Transportation, Volume 2 of the EIAR.

Overall, the cumulative impact of full road closures are considered to be **negative, significant but short term** and will be limited to local residents on the L7108 and L7109.

## 16.8 Land, Soils and Geology

All relevant developments in the immediate environs of the Proposed Project, which have been approved but are not yet fully constructed or operational have been reviewed as part of this assessment and key developments are summarised in Appendix 16-1, Volume 3 of the EIAR. All of these projects have been considered in evaluating the cumulative environmental effects of the proposed development.

Based on the location, nature and scale of these developments, and taking account of the results of the impact assessment for the Proposed Project, **no significant cumulative effects** will arise with respect to land, soils and geology.

Cumulative effects to land, soil and geology are considered likely to have an **imperceptible** impact and are therefore **not significant**.

## 16.9 Water

All committed development within the Study Area, which has been recently approved, have been reviewed as part of this assessment. The developments that have been considered are summarised in Appendix 16-1, Volume 3 of the EIAR and includes all relevant approved planning applications.

Cumulative effects to the Water Environment are considered likely to have an **imperceptible** impact and are therefore **not significant**.



## 16.10 Cultural Heritage

### 16.10.1 Proposed Cashla Peaker Plant

Sites which can contribute to the cumulative effect on archaeology and cultural heritage are those which have been granted permission as they are likely to either have been built or to be built in the future. In 2020, permission was granted for a milking parlour (PI. Ref. 20/239) within proximity of the proposed access road. However, no work has been undertaken, and the permission has lapsed. As nothing was constructed, it will not contribute to the cumulative effect on the archaeological and cultural heritage. There are no other recent planning applications lodged on land within or immediately adjacent to the Cashla Peaker Plant site.

Other developments with permission granted within 2 km include one-off housing and agricultural buildings and a wind-turbine test site. In the case of one-off housing and agricultural buildings, these are not considered to be detrimental to the setting of archaeological monuments and will not contribute to cumulative effects occurring. The wind turbine testing site (PI. Ref. 20/101) will affect the setting of archaeological monuments and can combine with the proposed development to contribute to the cumulative effect occurring.

In addition, there are two solar farms (PI. Refs. 17/1544, 20/961) located outside the study area, which are large scale projects that can contribute to the cumulative effect.

Subject to the implementation of the appropriate archaeological mitigation measures during the construction phase of the project, **no residual cumulative effects** on archaeological, architectural and cultural heritage are predicted. No significant adverse cumulative impacts will occur.

### 16.10.2 Proposed 220kV Grid Connection

There are a number of other developments along the project boundary including Gannow Wind Farm (PI. Ref. 25/61412), discussed separately below. The other developments include one-off housing, substation and grid connection and overhead lines. The other developments could combine with the proposed developments to contribute to the cumulative effect on the archaeological and cultural heritage. The underground nature of the proposed UGC means that it will not affect the setting of monuments.

Subject to the implementation of the appropriate archaeological mitigation measures during the construction phase of the project, **no residual cumulative effects** on archaeological, architectural and cultural heritage are predicted.

#### 16.10.2.1 Gannow Wind Farm (PI.Ref. 25/61412)

The proposed grid connection route is located on the L-7108, which is the same road identified for the grid connection in this Proposed Project.

There would be **no cumulative effect** predicted on the surrounding cultural heritage sites due to the underground nature of the cables. Subject to the implementation of the appropriate archaeological mitigation measures during the construction phase of the project, **no residual cumulative effects** on subsurface archaeological, architectural and cultural heritage remains are predicted.



## 16.11 Material Assets

A cumulative assessment has been undertaken by TLI (2026) in order to assess the potential effects should the Gannow Renewable Energy Development proceed in combination with the Proposed Project. The findings are presented in detail in Appendix 16-2, Volume 3 of this EIAR.

**No significant cumulative effects** are likely to occur, during the construction or operational stages of the Proposed Project, in combination with the proposed Gannow Wind Farm Grid.

With the implementation of mitigation measures for the Cashla Peaker Plant it is considered that there will be **no likely significant effects** regarding built services and waste management due to cumulative effects.

## 16.12 Major Accidents and Disasters

The risk from a major accident, at the Proposed Project, to human health and environment in the surrounding area, will be not significant.

There are no expected impacts from projects within 5km of the Proposed Project, from a major accidents and disasters perspective, as such, there are **no significant cumulative effects** with the Proposed Project from a major accidents and disasters perspective.

During the construction, operation and decommissioning phase, since there are no likely negative impacts on the project or to off-site receptors, the cumulative impacts, of major accidents and disasters, are considered **imperceptible** and **neutral** to the Proposed Project and to cumulative developments in the surrounding area.

### 16.12.1 Indirect or Secondary Impacts

The Proposed Project will be a COMAH facility as it will store above threshold quantities of hazardous materials, which are in excess of the defined COMAH thresholds set out in Schedule 1 of the COMAH Regulations. The Health and Safety Authority (HSA), which is the central competent authority for regulatory control of COMAH sites, require COMAH sites to have a 'consultation distance'. A consultation distance (CD) is a distance around an establishment, within which there are potentially significant consequences from major accidents to people (or to the environment). The developers of future developments within the consultation distance of the Proposed Project would be required to complete a Land Use Planning assessment. Therefore, the Proposed Project could not have indirect impacts on the type of project that are permitted within its consultation distance.

A proposed consultation distance has been provided in the Land Use Planning assessment, attached in Appendix 15-1, Volume 3 of the EIAR.

The overall character of the surrounding area is a low density population. Therefore, the indirect impacts are considered **not significant**.



# 17. Interactions

This section describes interactions between impacts on various environmental factors. A summary matrix showing interdependencies between these environmental attributes is presented in the Table 17-1 below for the Proposed Project. The description of the existing site and the Proposed Project are provided in Chapter 1 and Chapter 2 of the EIAR, and in the Planning Statement.

All potential interactions have been addressed as required throughout the EIAR. During each stage of the assessment contributors have liaised with each other (where relevant) to ensure that all such potential interactions have been robustly addressed.

A summary matrix showing key interactions and interdependencies between environmental attributes is presented in Table 17.1, for the construction phase and the operational phase. Given that the decommissioning phase will be less impactful on the environment than the construction phase, it is conservatively considered that the construction phase is suitably representative of potential effects and impacts during the decommissioning phase.

All potential effects arising from interactions and interdependencies between environmental attributes were identified during the design phase process as part of the preparation of this EIAR, and either avoided through design measures, or addressed through specific mitigation measures, as presented in Chapter 4 Population and Human Health, to Chapter 15 Major Accidents and Disasters, and summarised in Chapter 18 Schedule of Environmental Commitments.

A detailed review of all potential interactions is presented in Chapter 17 Interactions, Volume 2 of the EIAR.



**Table 17-1 - Summary Interactions Matrix**

	Chapter 4 – Population & Human Health		Chapter 5 - Biodiversity		Chapter 6 – Landscape & Visual		Chapter 7 – Air Quality		Chapter 8 - Climate		Chapter 9 – Noise & Vibration		Chapter 10 - Traffic		Chapter 11 – Land, Soils & Geology		Chapter 12 - Water		Chapter 13 – Cultural Heritage		Chapter 14 – Material Assets		
	Con. <sup>7</sup>	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	
Chapter 4 – Population & Human Health	Grey	Grey	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*	✓	*	*	*	*	*	*
Chapter 5 - Biodiversity	*	*	Grey	Grey	✓	✓	✓	✓	✓	✓	✓	✓	*	*	*	*	✓	*	*	*	*	*	*
Chapter 6 – Landscape & Visual	*	*	✓	✓	Grey	Grey	*	*	*	*	*	*	*	*	*	*	*	*	✓	✓	*	*	*
Chapter 7 – Air Quality	✓	✓	✓	✓	*	*	Grey	Grey	✓	✓	*	*	✓	✓	✓	*	✓	*	*	*	✓	✓	✓
Chapter 8 - Climate	✓	*	*	*	*	*	✓	✓	Grey	Grey	*	*	✓	✓	✓	*	✓	*	*	*	✓	✓	✓
Chapter 9 – Noise & Vibration	✓	*	✓	✓	*	*	*	*	*	*	Grey	Grey	✓	✓	*	*	*	*	*	*	*	*	*
Chapter 10 - Traffic	✓	*	*	*	*	*	✓	✓	✓	✓	✓	✓	Grey	Grey	*	*	*	*	*	*	*	*	*

<sup>7</sup> Note: Con. Refers to Construction Phase. Op. refers to Operational Phase

**Legend:** \* denotes no interaction ✓ denotes interaction identified Grey cells denote topic under assessment.



	Chapter 4 – Population & Human Health		Chapter 5 - Biodiversity		Chapter 6 – Landscape & Visual		Chapter 7 – Air Quality		Chapter 8 - Climate		Chapter 9 – Noise & Vibration		Chapter 10 - Traffic		Chapter 11 – Land, Soils & Geology		Chapter 12 - Water		Chapter 13 – Cultural Heritage		Chapter 14 – Material Assets	
Chapter 11 – Land, Soils & Geology	✓	*	*	*	*	*	✓	*	✓	✓	*	*	*	*			*	*			✓	✓
Chapter 12 - Water	✓	*	✓	*	*	*	✓	*	✓	✓	*	*	*	*	✓	*					✓	✓
Chapter 13 – Cultural Heritage	*	*	*	*	✓	✓	*	*	*	*	*	*	*	*	✓	*	*	*				
Chapter 14 – Material Assets	*	*	*	*	*	*	✓	✓	✓	*	*	*	✓	✓	✓	✓	✓	*				

Legend: \* denotes no interaction ✓ denotes interaction identified Grey cells denote topic under assessment.



# 18. Schedule of Environmental Commitments

A schedule of environmental commitments has been prepared, for ease of reference and clarity, and to facilitate enforcement of all environmental mitigation and monitoring measures specified within Chapters 4 to 15, Volume 2 of the EIAR.

All mitigation and monitoring commitments detailed within the EIAR have been included in a separate compendium and are presented in Chapter 18 – Schedule of Commitments, Volume 2 of the EIAR.

These commitments have been incorporated into the Construction Environmental Management Plan (CEMP) submitted as part of this planning application (refer to Appendix 2-10, Volume 3 of the EIAR). The CEMP is a live document which will be added to in the Detailed CEMP, prepared by the Contractor, which will include any future additional requirements (e.g. planning conditions).



# 19. Summary of Residual Impacts

This chapter summarises the potential significant residual impacts which may result from the construction, operational and decommissioning phases of the Proposed Project. Refer to Chapter 4 to Chapter 15, Volume 2 of the EIAR for the full impact assessments.

Residual impacts are the final or intended impacts which occur after the proposed mitigation measures have been implemented. They refer to the degree of change that will occur after the proposed mitigation measures, as summarised in Chapter 18 (Schedule of Environmental Commitments) Volume 2 of this EIAR, have taken effect.

## 19.1 Population & Human Health

**Significant residual effects are anticipated** during the construction phase in relation to access for residents and businesses and employees along a section of Lisheenkyle East Road due to its closure to facilitate installation of the cable. Refer to Chapter 10 Traffic and Transportation, Volume 2 of the EIAR, and the CTMP (Appendix 2-11, Volume 2 of the EIAR) for details as to how this will be managed. Further liaison with residents will continue to take place including regular updates on the progress of the project. These effects are expected as a result of the installation of the cable and the associated road closures and diversions. These effects would be short-term and temporary to the construction phase.

Whilst not anticipated to be significant, adverse effects are also anticipated for residents in the wider study area, walkers, cyclists and horse riders and users of services in the wider area during construction due to disruption to access and increased journey lengths.

**Non-significant adverse effects** are also anticipated in terms of safety for residents as a result of construction activities and introduction of construction traffic and for construction workers who are exposed to potential human health risks.

**Non-significant beneficial effects** are anticipated for businesses and local communities in terms of employment and income due to increased opportunity for employment and stimulation of the local economy and job market.

Taking account of mitigation measures, as detailed further in Chapter 4 Population and Human Health, Volume 2 of the EIAR, all effects identified during construction will be **temporary** and **limited to the construction phase**.

## 19.2 Biodiversity

The residual impacts of the Proposed Project in relation to biodiversity are as follows:

### Impacts on habitats:

- Given the **extensive planting in the proposed landscaping, the overall impact to habitats will be permanent significant and positive.**

### Impacts on bats:



- Impacts on bats – given the extensive planting in the proposed landscaping which will create new foraging/commuting habitat for bats, the overall impact to bats will be **permanent significant** and **positive**.
- Impacts relating to light disturbance during both Construction and Operation are considered **not-significant** following mitigation.

**Impacts on birds:**

- Impacts on birds – given the extensive planting in the proposed landscaping, the overall impact to birds will be **permanent significant** and **positive**.
- Mitigation in the form of vegetation clearance being timed to outside of the breeding bird season there will be **no significant** disturbance impacts.

**Impacts on mammals:**

- Impacts on mammals – given the mitigation measures during the Construction Phase there will be **no significant** impacts to mammals.

**Impacts on amphibians:**

- Impacts on amphibians – given the water protection mitigation measures, deterioration of amphibian habitat will **not be significant**.

## 19.3 Landscape & Visual

### 19.3.1 Landscape Effects

As outlined at Chapter 6 Landscape and Visual, Volume 2 of the EIAR the significance of the effects including mitigation on Central Galway Complex Landscape (6b. Southern River Clare Basin Landscape Character Unit) within the study area is judged to be; **Moderate Adverse Effect** during construction, **Slight Adverse Effect** during operation, **Slight Adverse Effect** during decommissioning, **Slight Beneficial Effect** post decommissioning and permanent.

The significance of the effects on Urban Environs (Athenry) Landscape Character Type within the study area is judged to be **Neutral Effect** during construction, operation, decommissioning and post-decommissioning.

### 19.3.2 Visual Effects

Refer to Table 19-1

Table 6-1 for a summary of residual visual effects, all of which will be **not significant**.

**Table 19-1 - Summary of Residual Visual Effects**

Viewpoint	Significance of Visual Effect Construction	Significance of Visual Effect Operation	Significance of Visual Effect Decommissioning	Significance of Visual Effect Post-Decommissioning
1	Moderate Adverse	Moderate Adverse	Moderate Adverse	Moderate Beneficial
2	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial



3	Neutral	Neutral	Neutral	Neutral
4	Moderate Adverse	Slight Adverse	Slight Adverse	Slight Beneficial
5	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial
6	Slight Adverse	Slight Adverse	Slight Adverse	Neutral
7	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial
8	Slight/ Moderate Adverse	Slight/ Moderate Adverse	Slight/ Moderate Adverse	Slight Beneficial
9	Neutral	Neutral	Neutral	Neutral
10	Slight Adverse	Slight Adverse	Slight Adverse	Neutral
11	Neutral	Neutral	Neutral	Neutral
12	Neutral	Neutral	Neutral	Neutral
13	Moderate Adverse	Moderate Adverse	Moderate Adverse	Slight Beneficial
14	Neutral	Neutral	Neutral	Neutral
15	Neutral	Neutral	Neutral	Neutral
16	Neutral	Neutral	Neutral	Neutral
17	Neutral	Neutral	Neutral	Neutral
18	Neutral	Neutral	Neutral	Neutral
19	Neutral	Neutral	Neutral	Neutral
20	Neutral	Neutral	Neutral	Neutral
21	Neutral	Neutral	Neutral	Neutral
22	Neutral	Neutral	Neutral	Neutral
23	Neutral	Neutral	Neutral	Neutral
24	Neutral	Neutral	Neutral	Neutral



## 19.4 Air Quality

When the dust mitigation measures detailed in the mitigation section, Chapter 7 Air Quality, Volume 2 of the EIAR, are implemented, the residual effect of fugitive emissions of dust and particulate matter from the site will be **short-term, direct, localised, negative and not significant** in nature and will pose no nuisance at nearby receptors.

The effect of operational phase emission from the proposed development will be **direct, long-term, negative and not significant**.

The residual effect during the decommissioning phase on air quality will be **short-term, direct, negative and not significant**.

## 19.5 Climate

As per the TII and ISEP assessment criteria the residual effect of the Proposed Project in relation to GHG emissions is considered **direct, long-term, negative and slight**, which is overall **not significant** in EIA terms.

Design mitigation has been considered when assessing the vulnerability of the development to future climate change. In relation to climate change vulnerability, it has been assessed that there are no significant risks to the proposed development as a result of climate change. The residual effect of climate change on the proposed development is considered **direct, long-term, negative and imperceptible**, which is overall **not significant** in EIA terms.

## 19.6 Noise and Vibration

### 19.6.1 Construction Phase

Vibration levels will be orders of magnitude below a level that would be perceptible to building occupants and will also be orders of magnitudes below those associated with building response. The associated impact is considered **neutral, imperceptible and short-term**.

The residual construction noise effects will be **negative, slight to moderate and short term** in nature.

### 19.6.2 Operational Phase

As the nearest sensitive receiver is at least 450m from the site, the Proposed Project is not likely to give rise to any notable sources of vibration and will therefore not result in any perceptible levels of vibration at the closest sensitive locations off site. The impact is **not significant**.

#### 19.6.2.1 Building Services Noise / Emergency Site Operation

The resultant noise effect is **negative, slight impact and long-term**.



### 19.6.2.2 Additional Vehicular Traffic on Public Roads

In terms of the additional operational traffic on local roads that will be generated as a result of the Proposed Project, the impacts are determined to be **neutral, imperceptible and long term**.

### 19.6.3 Decommissioning Phase

Residual decommissioning noise effects are **negative, not significant and short-term**.

## 19.7 Traffic and Transportation

The traffic-related residual effects of the Proposed Project are anticipated to be “**negligible**”. Cumulative impacts (via. the Proposed Project and the Gannow Windfarm (Ref: 25/61412)) are considered **negative and significant but temporary**, confined to the construction phase and primarily affecting local traffic and residents along the L-7108 and L-7109. However, a Construction Traffic Management Plan (CTMP) has been developed (refer to Appendix 2-11, Volume 3 of the EIAR) which includes a detailed CTMP prepared in full at planning stage, for the proposed underground cable (UGC) installation along these roads. The mitigation measures as set out in the CTMP (refer to Appendix 2-11, Volume 3 of the EIAR) will ensure these effects are managed.

While short-term significant impacts are expected during the construction phase, significant mitigation measures will be implemented to reduce the overall impact. **No other significant impacts are anticipated** for the Proposed Project during any other phase.

## 19.8 Land, Soils and Geology

### 19.8.1 Construction Phase

The impact on land take is likely to have a **negative slight impact** on the environment as there is no mitigation for long-term land take of fertile soils. As a result, there will be **no significant effects** to land during the construction phase as a result of the Proposed Project.

The impact to land contamination, overall soils and geology is likely to have a **negative imperceptible** impact resulting in **no significant effects** during the construction phase.

### 19.8.2 Operational Phase

The impact to land contamination is likely to have a **negative imperceptible** impact resulting in **no significant effects** during the operational phase.

### 19.8.3 Decommissioning Phase

The impact on soils is likely to have a **positive slight impact** resulting in **no significant effects** during the decommissioning phase.



## 19.9 Water

### 19.9.1 Construction phase

The impact on the Water Environment is likely to be **imperceptible, temporary and not significant** as a result of the Proposed Project.

### 19.9.2 Operational Phase

The impact on Water Environment during operation is likely to have an **imperceptible, permanent and not significant**,

### 19.9.3 Decommissioning Phase

With regard to the groundwater and surface water effects during decommissioning of the Cashla Peaker Plant and the associated underground transmission gas pipeline the following is noted:

- Full decommissioning of the plant and pipeline will be done in accordance with prevailing best practice and undertaken by GNI. It is not anticipated that best practice decommissioning will adversely impact the water environment and presents no specific residual impacts.
- All decommissioning works will be carried out in accordance with the Environmental Liabilities Risk Assessment (ELRA) and a Closure, Restoration and Aftercare Management Plan (CRAMP) which will be subject to approval from the EPA prior to commencement of the operational phase.
- Once decommissioning works are completed, the site will be reinstated and returned to a condition compatible with the surrounding land use, including the application of suitable soils and reseeded where required. **No significant adverse effects** are likely, with respect to Water.

## 19.10 Cultural Heritage

The proposed Peaker Plant and access route were the subject of a preceding test excavation which confirmed that the geophysical anomalies identified by Dowling (2025) were not archaeological in nature. It also did not identify any further archaeological features/deposits within the project area. Therefore, as **no direct effects** are predicted, there are **no residual effects** for this part of the proposed development.

The proposed access route will have a **direct, physical effect** on the unknown subsurface remains of CH057 while proposed UGC will have a **direct, physical effect** on the unknown subsurface remains of CH059. The proposed UGC will also have an **indirect effect on CH019 and CH020** by directly and physically effecting unknown subsurface archaeology related to the monuments. However, given the sub-surface nature of potential archaeology, the potential to excavate this site through the construction phase will provide data to the archaeological community from the potential subsurface sites. The potential to gain knowledge outweighs the negative impact.

Furthermore, the implementation of mitigation measures for the proposed grid connection will ensure that the **residual effect is slight and/or moderate**, as well as **slight and/or negligible**.

Subject to the implementation of the appropriate archaeological mitigation measures during the construction phase of the project, **no significant residual impacts** on archaeological, architectural and cultural heritage are predicted.



## 19.11 Material Assets

Taking account of the proposed mitigation measures for Material Assets, specifically built services the residual effects of the Proposed Project will be **short-term and not significant** during the construction and decommissioning phases, and **long-term and not significant** during the operational phase. There will be **no likely significant** residual effects associated with built services.

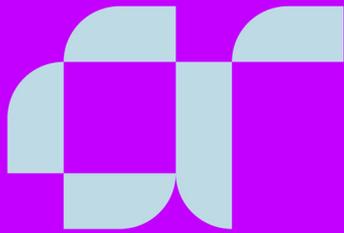
Taking account of the proposed mitigation measures for Material Assets, specifically waste management, the residual effects of the Proposed Project will be **short-term and imperceptible** during the construction phase, long-term and **imperceptible** during the operational phase and **short-term and imperceptible** during the decommission phase. There will be no likely significant residual effects associated with waste management and / or generation.

## 19.12 Major Accidents and Disasters

The residual effects are the final predicted or intended effects which occur after the proposed mitigation measures have been implemented. As **no likely significant effects** were identified, there is no potential for residual effects.



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