An Bord Pleanála

Inspector's Report

ABP-313538-22

Development:	Open Cycle Gas Turbine plant (299MW) & associated infrastructure.
Location:	Derryfrench, Tynagh, Loughrea, Co. Galway.
Planning Authority:	Galway County Council
Planning Reference:	212192
Applicant:	EP Energy Developments Ltd.
Type of Appeal:	Third Party
Appellant:	An Taisce
Observations:	Colm Shaughnessy
Date of Site Inspection:	26th October 2022
Inspector:	**Karla Mc Bride**

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1.0 INTRODUCTION

1.1 Context

This case relates to a Third Party appeal by An Taisce against the decision of Galway County Council to grant permission for an Open Cycle Gas Turbine (OCGT) energy generating facility within and adjacent to the existing operational Tynagh Power Station complex which generates and supplies electricity to the national grid.

1.2 Pre-Application Consultation

The applicant requested Pre-Application Consultations under Section 37B of the Planning and Development Act, 2000 (as amended) under ABP-310334-21. One pre-application meeting took place on 22nd July 2021. The Board confirmed in September 2021 that the proposed development did not constitute strategic infrastructure development as it did not come within the scope of S.37A or S.182 of the Planning and Development Act, 2000 (as amended) and that an application for planning permission should be made directly to Galway County Council.

1.3 Project Background

The applicant is proposing to install an Open Cycle Gas Turbine (OCGT) power plant within the existing energy complex which will operate as a “Peaking Plant” when required to address forecasted electricity capacity shortfalls in the coming years and to provide a backup when there is a gap between renewable power generation and demand, with a view to maintaining security of supply. Natural gas will be provided by the existing gas pipeline within the site, and a secondary fuel supply of up to 6000m3 of distillate fuel will be stored in tanks within the site, in the event of interruptions to the gas supply. The generating unit will be connected to the existing on-site 220kV transformer via cables which are connected to the national grid via the existing on-site 220kV substation. The COMAH/Seveso site operates under an EPA Industrial Emissions Licence (Reg. No. P070- 01) as reviewed (PO700-02).

1.4 Site Location and Description

The appeal site is located within the townland of Derryfrench, c.1.5km to the NW of Tynagh Village and c.12km SE of Loughrea Town in east County Galway. The site is located within the existing Tynagh Power Station complex which occupies a section of the former Tynagh lead and zinc mine. The W site boundary is defined by trees and hedges, and the surrounding wider rural area beyond the former mining area and tailings pond is agricultural in character. There is a neighbouring industrial operation (Sperrin Galvanisers) that operates under an EPA IPPC licence, and shares the vehicular access off the local road to the W (L-4310) which extend S from the N65. There are several detached houses along this local road, with the densities increasing towards the junction with the N65 to the N and Tynagh Village to the SE. There are also several farms and an equestrian centre in the surrounding area.

The existing energy complex is currently in use by Tynagh Energy, with ESB and Gas Networks Ireland infrastructure present. This includes buildings and structures related to the generation of electricity and the single emission stack associated with the existing operational Closed Cycle Gas Turbine (CCGT) is visible from the surrounding area. The proposed Open Cycle Gas Turbine (OCGT) would be located in the SW section of the complex on lands currently occupied by a car park, warehouse and administration buildings which would be demolished and then relocated to the northern and currently unused section to the overall complex.

There are no nearby European or Nationally designated sites in the immediate vicinity, although there are several sensitive sites in the wider area (in excess of 7km), including the Slieve Aughty Mountains SPA to the W and S, and the Lough Derg SAC and SPA to the SE. There are also several features of local historic and cultural heritage interest in the surrounding area.

Maps and photographs in Appendix 1 describe the site in more detail.

1.5 Planning history

The site and environs have been the subject of several planning applications made to Galway County Council, the most relevant of which are summarised below:

Appeal site:

***Ref. 03/2943*:** Permission granted for a 400MW electricity generating station (EIS).

Ref. 04/1974: Permission granted for a 220kV overhead transmission line.

Ref. 04/2193: Permission granted for a natural gas pressure reducing station comprising single storey buildings, fenced area & associate pipework.

Ref. 2511: Permission granted for amendments to 03/2943 & new buildings.

Ref. 04/4554: Permission refused for a c.2km temporary road & associated services to facilitate the delivery of abnormally large loads of electricity generating equipment for the 400MW gas powered plant.

Nearby:

Ref. 00/5409: Permission granted for a new 220kV overhead line from a proposed 400/220kV substation at Ballynaheskeragh to the existing Cashla 220kV substation at Barrettspark (ESB) (c.47km).

Other: several permissions granted for various elements of Tynagh Mines, the neighbouring galvanised steel fabrication facility & telecom monopole structures.

Industrial Emissions Licence:

***IE Licence* PO700-01 & 02:** emissions from the existing Tynagh Energy facility are governed by an EPA Industrial Emissions Licence (under 2.1 of the First Schedule of the EPA Act for the "Combustion of fuels in installations with a total rated thermal input of 50MW or more.")

2.0 PROPOSED DEVELOPMENT

2.1 Documentation

The application documentation includes the following:

- Planning Report
- Environmental Impact Assessment Report (EIAR)
- Screening for Appropriate Assessment report (AA)
- Planning Drawings & Photomontages

The EIAR was supported by several Technical Appendices which included:

- Appendix 5A: oCEMP
- Appendix 7A: Air Quality Assessment
- Appendix 7B: Green House Gas Report
- Appendix 9A-E: Ecology reports
- Appendix 11A: Noise Survey Data
- Appendix 12A: Flood Risk Assessment
- Appendix 12B: Surface Water Analytical Results
- Appendix 13A: Ground Investigation Report
- Appendix 14A-E: Roads & traffic reports

The Further Information response was supported by:

- Land Use Planning Risk Assessment report.

2.2 Development Description

The proposed development would comprise the installation of an Open Cycle Gas Turbine (OCGT) electricity generating plant (299MW) on a 4.34 ha site, comprising:

- OCGT unit, 40m high emissions stack & associated plant (incl. air intake, fin-fan coolers, main & auxiliary transformers, fire wall, electrical rooms, skids, propane gas storage, fire water tank (c.1000m^3) & pump house) and acoustic barriers.

- Hardstanding maintenance area.
- Continuous Emissions Monitoring System (CEMS).
- Gas pipeline connection (c.154m long)
- Secondary fuel storage area comprising 4 x bunded distillate fuel storge tanks (c.6000m_3).
- Fuel forwarding building & fuel forwarding gantry.
- Extension to existing distillate uploading plant.
- Expanded Above Ground Installation.
- A new 220kV bus section within existing substation.
- Demolition & replacement of several buildings and car parks.
- Wastewater treatment plant & amended drainage infrastructure.
- All associated & ancillary site works.

The proposed construction and installation works will take c.18 to 24 months to complete, the facility will operate for up to 1,500 hours per annum (on a 5-year rolling average as per European Best Available Techniques (BAT)), it will have a stated operational lifespan on 25 years, and will be decommissioned in c.2049.

2.3 Environmental Impact Assessment Report (EIAR)

The EIAR was prepared using the standard “grouped format structure”. It described the site, surrounding area and the existing operational facility. It explained the background to the project, the benefits arising and the need for the development based on an analysis of existing and anticipated energy requirements and anticipated shortfalls. The applicant confirms that the facility is located within a Seveso site and that an amendment to the EPA Industrial Emissions Licence will be sought. It provided a detailed description of the existing and proposed facilities, identified constraints and described the alternatives considered.

The main body of the EIAR outlined the study methodologies and assessed the potential impacts on the receiving environment under the required range of headings, and it proposed mitigation measures. It identified residual and cumulative impacts and assessed interactions. It also included a summary of the qualifications and experience of the main contributors to the report, stated that no difficulties were

encountered. It had regard to the risk of major accidents or natural disasters, and to Climate Change. The EIAR was informed by several technical appendices and a Non-Technical Summary was provided.

The EIAR stated that the proposed development would involve works at an existing operational facility. There would be additional emissions to air from construction vehicles and the operational generator stack which could potentially have a significant effect on air quality and climate, and the increased vehicular movements during construction could potentially affect roads and traffic. The EIAR concluded that any adverse environmental impacts will be minimal and managed by mitigation measures and compliance with the EPA IE Licence requirements.

2.4 Stage 1 AA Screening Report

This report described the site, and the characteristics of the existing facility and proposed development. It summarised the legislative requirements and described the AA screening methodology. It identified the European sites within a 15km radius/ Zone of Influence, described the likely sources of impact, and concluded that the project did not have the potential to affect any European Sites in the wider area.

3.0 PLANNING AUTHORITY DECISION

3.1 Planning authority decision

The planning authority decided to grant permission subject to 26 conditions: -

- No. 2 capped the maximum output at 299MW.
- No. 3 required compliance with EIAR mitigation measures.
- No. 4 set out requirements for the final CEMP.
- No. 6 restricted the operational lifespan to 25 years.
- No. 7 required a decommissioning and site restoration plan.
- No. 8 dealt with connections to the water treatment system.

3.2 Further Information

The planning authority sought and received Further Information (and Further Unsolicited Information for Item no.11) in relation to the following items: -

1. Reason for submitting an EIAR (Schedule 5 - mandatory or subthreshold) – *subthreshold on basis of the characteristics of the development.*
2. Details & rationale for operational usage per year (peaking plant as needed v 1500 hrs/yr) – *referenced statements by Minister of EC&C in relation to the need for flexible gas fired generation to support the variable nature of renewable energy production, and the need for c.2000MW of up to 2030; facility will address shortfalls during periods of peak demand; and it will operate up to the maximum 1,500 hours per annum.*
3. Consideration of alternative sites – *considered reasonable alternatives as opposed to potential alternatives, and choice of site relates to the availability of land, nearby fuel supply & grid connection.*
4. Details of potential air quality impacts on ecologically sensitive receptors & update AA Screening – *details provided & note absence of any nearby sensitive sites.*
5. Proposals for the independent management of contaminated soils – *most work will take place on the existing power station slab & concerns will be addressed in the CEMP.*
6. Refer to a previous 2009 flood event at the site in the SFRA; and provide certification of T Value results – *flood event occurred in the vicinity of the site, adequate protection measures & a revised SFRA is not required; new Site Suitability report provided with certified T Values.*
7. Amend noise assessment to include a house under construction; provide an assessment of potential vibration impacts on the receiving environment (incl. Protected Structures) – *this noise receptor is comparable to Monitoring Location M2 with no adverse impacts predicted; vibration impacts scoped out because of intervening distances, bunding & low traffic volumes (incl. PSs).*
8. Assess air quality impacts from stack emissions (other than CO & NOx); assess cumulative impacts in-combination with Sperrin Galvanisers; assess impacts on non-designated ecological receptors; provide a rational for screening out the consideration of odours; amend assessment to include a

house under construction; and assess impacts of dust & air emissions on nearby waterbodies (some with Poor WFD status) – *miniscule other emissions; in-comparable emissions from Sperrins; note absence of any nearby sensitive sites but updates provided; odours scoped out as the emissions are not odorous; emission impacts at nearby house would be similar to those at Receptor (R1) and not significant; and note absence of any nearby sensitive waterbody sites (tailings ponds) & addressed in CEMP.*

9. Submit an up-to-date weight and condition survey for bridges – *some derails provided.*
10. Reassess interactions section of the EIAR – *details provided.*
11. Address HSA concerns, and in particular whether the project comprises a new or modified installation, and Regulation 12 of the COMAH Regulations 2015 in relation to the consideration of significant modifications – *satisfied that the industrial proposal is a change to an existing COMAH site rather than the creation of a new installation, the lower tier threshold is relevant (owing of the quantity of distillate material) regardless of the project being new or modified, the submitted Land Use Planning Risk Assessment determines the level of risk that that would be presented by the new development in the context of a Major Accident scenario and the impact on the surrounding environs, which concludes that the project satisfies the HSA risk-based criteria.*
12. Address concerns raised in the public submissions (incl. future obsolescence of fossil fuel infrastructure; future proofing beyond 25 years; insufficient consideration of CO_2 leakage [notwithstanding unsolicited FI response]; and lack of consideration of emissions data from EP, SEAI or Eirgrid in EIAR) – *interim energy facilities required; lifespan related to design & dependent on licences & consents; reference to CO_2 leakage relates to off-site impacts of milk production; and satisfied that the air quality assessments are robust.*

3.3 Technical reports

Planner's report: Following the receipt of FI the Planning Officer recommended a grant of planning permission subject to 26 x standard conditions, the most pertinent of which are summarised above in section 3.1.

Roads Dept: requested FI in relation to a Falling Wight Deflectometer survey & condition survey for bridges along the L4310. No objection following receipt of same and several standard conditions recommended.

Environment Section: No objection subject to conditions requiring: - full implementation of EIAR mitigation & monitoring measures, agreed CEMP, appointment of an Ecological Clerk of Works; certification of T Value results required; and no adverse impacts on ground water anticipated.

Conservation Officer: No objection subject to a condition requiring the monitoring of vibration impacts at two RPS structures (Castletown Bridge & Thatched House).

Consultant's report: An independent assessment of the EIAR, which was received by the planning authority on 20/01/22, advised that the EIA report was satisfactory.

3.4 Prescribed Bodies

HSA: queried whether the project is a new development or a modification to an existing COMAH site, and FI requested. No objection following receipt of same.

EPA: stated the following: -

- Tynagh Energy was issued with an IPC Licence in 2004 (PO700-01) which was revised on 05/12/2012 (PO700-02), and again on 18/12/2013 to incorporate the requirements of an IE Licence.
- The existing activity requires a licence as it falls within para. 2.1 of the First Schedule of the EPA Act (as amended) for the "Combustion of fuels in installations with a total rated thermal input of 50MW or more."
- The proposed development may require an IE Licence under Class 2.1 of the EPA Act, or a review or amendment of the existing licence.
- An application has not yet been received, and EPA cannot deal with a Licence application until a planning decision has been made.
- Note that an EIAR has been submitted and it is likely that this will have to be considered by the EPA as part of any review of the IE licence.

- All matters to do with emissions to the environment from the proposed activities will be assessed by the EPA.

An Taisce: raised concerns in relation to: -

- Incompatibility with climate obligations, decarbonisation targets, unacceptable use of natural gas as a “Bridge” fuel & obsolesce.
- Inadequate identification, evaluation & consideration of GHG emissions and climate impacts (incl. Indirect sourcing impacts).
- Unrealistic operational lifespan with combined insufficient calculation of operational phase emissions over 25 instead of 50 years; and discrepancies in stated operational emissions in the EIAR.
- Inadequate cumulative impact assessment of GHG emissions.
- No operational mitigation measures.

3.5 Public submissions

Several submissions received from environmental groups and local residents who raised concerns in relation to: - adverse impacts on visual & residential amenity (incl. noise, air equality & emissions), public health & farm animals; risk of major accidents & public safety; traffic safety; waste management; climate obligations, impacts, actions & targets; built-in obsolesce, future proofing & gas connection; EIAR discrepancies & inaccuracies; and EPA IPPC & IE licences.

4.0 THIRD PARTY APPEAL

4.1 Grounds of appeal

One appeal has been received from An Taisce who raised the following concerns: -

1. ***Incompatibility with Climate Action & Low Carbon Development Act:***
    - Incompatible with achievement of the 2050 net zero target.
    - EIAR calculates that the OCGT plant will have net operational GHG emissions of 5,364,956 tCO_{2e} over its 25-year life span.
    - It also states that the plant will contribute less than 1% of any of the existing RoI carbon budgets with resultant minor adverse effects.

- Analysis is insufficient to justify the proposal against emission reduction obligations, as most projects will have similar small-scale impacts.
- Individual projects must demonstrate alignment with sectoral emission reduction plans, broader carbon budgets, Climate Act reduction targets & climate neutrality by 2050.
- This project expands Ireland's fossil fuel infrastructure which creates a lock-in to long term fossil gas use.
- No operational emissions abatement or mitigation has been proposed.
- No demonstration of compatibility with emissions reduction trajectories.

2. ***Justification for the proposed development***:

- Disagree that the plant is urgently needed to provide resilience to the electricity grid & address capacity shortfalls/gaps in renewable supply.
- Development of additional fossil fuel infrastructure is not viable pending the transition to renewables, and will lead to further insecurity of supply & failure to reach targets.
- Non-compliance with NPF renewable energy & environmental protection policies (NPO 54 & 52).
- NDP objectives to deliver c.2GW of conventional electricity to support the transition to renewables, conflicts with Climate Act obligations.
- National Mitigation Plan, 2017 was struck down by the Supreme Court.
- The Climate action Plan 2019 has been superseded by the 2021 Plan
- The policies in Ireland's Transition to a Low Carbon Energy Future, 2015 have not yet demonstrated compliance with the Climate Act.
- Non-compliance with Development Plan climate polices & objectives.

3. ***Operational Emissions & hours***:

- Discrepancies in the EIAR operational emissions calculations (c.2 million tonnes of CO_{2e}), which were not corrected in the RFI response.
    - Table 7.1 calculates net operational GHG emissions as 214,598tCO_{2e} per annum (or 5,364,956 tCO_{2e} over 25 years).

    - Table 7.2 projects the annual emissions as 201,598tCO_{2e}.
    - Appendix 7B S.10.1.2 refers to 7,087,755tCO_{2e} (or 283, 511tCO_{2e} per annum (over the lifetime of the project.
- No operational emissions abatement plan despite high CO_2 emissions.
- Eirgrid notes that OCGTs are not suitable for emissions mitigation through carbon capture & storage, an that fuel should be renewable.
- Discrepancies in the EIAR & RFI in relation to operational hours, the updated EIAR states that plant will operate for up to 1,500 hours/year on a 5-year rolling average with maximum annual operations not exceeding 2,250 hours, while the RFI does not mention 2,250 hours.

4. ***Natural Gas & Methane leakage***:

    - Natural gas is touted as having has lower emissions at the point of combustion than other fossil fuels.
    - The methane emissions (86 times the global warming potential of CO_2 over 20 years) released throughout the supply chain mean that natural gas has no benefit over other fossil fuels.

5. ***Stranded assets***:

    - Long-term viability and investment risk of a new fossil fuel development such as the proposed OCGT plant must be fully assessed.
    - Suggested transition to hydrogen use is very complex technically & procedurally and its viability has yet to be proven.
    - This cannot be considered as future proofing, and any future transitions would require various consents processes.

6. ***Obligations on Public Bodies***:
    - Section 15(1) of the Climate Act states that a relevant body shall, as far as practicable, perform its function in a manner consistent with several climate action plans, strategies, sectoral adaptation plans etc.
    - Proposal must be assessed against the Climate Act (incl. the recently approved carbon budgets in the most recent Climate Action Plan).

4.2 First Party response

- Project is consistent with the obligations of the 2021 Climate Act by supporting the continued expansion of Ireland's renewable generation capacity while maintaining security of supply.
- Project type is a requirement of the Climate Action Plan which states that in order to meet the required level of emissions reduction by 2030 Ireland must "Deliver c.2GW of new flexible gas fired power stations in support of a high variable renewable electricity system".
- Project type is urgently needed to ensure security of supply and is a key component of the sectoral emissions reduction plan for the electricity sector and will support targeted emissions reductions.
- Project Is a Strategic Investment Priority of the NDP, is explicitly supported by Government policy - which recognises that the delivery of such development as "a national priority" and is accordance with planning policy at all levels.
- Project is compatible with current local climate change, air quality, environmental & energy policies.

- Accept that there are errors in the presentation of operational emissions data (EIAR & RFI), current data provided with no impact on EIAR assessment or change to EIAR conclusions.
    - Total annual emissions: 237,146tCO_{2e}
    - Total 25-year emissions: 5,928,649 tCO_{2e}
    - Percentage emissions: 1.00%
- Published data from the EPA, SEAI or Eirgrid was not directly referenced in the EIAR as operational gas emissions were calculated based on project specific data in relation to the design gas consumption required to generate electricity for a 299MW system using the UK BEIS carbon conversion factors.
- There is no requirement under the Climate Action Plan or Climate Act for individual projects to specify abatement as part of the application.

- Operational running hours will be enforced by the EPA via the IE Licence & maximum permitted hours under European BAT are 1,500 hours per year (5-year rolling average).
- Not necessary or practical to consider the full life cycle of gas (raw material, extraction, production, transport etc) in assessments.
- Project ideally located within an existing power station site that benefits from a range of existing supply & transmission infrastructure which has been subject to an EIA and assessment against carbon budgets.
- In relation to Stranded Assets, the investment risk is borne by the applicant. And it is not a relevant consideration for ABP.

- Amend Condition. 17 (Working hours) as some works will take place outside normal working hours (incl. concrete pours) and current condition would be unduly restrictive, and reword as follows:
    - Construction work shall take place between 0700hrs and 1900hrs Monday to Friday and the hours of 0700 and 1300 on Saturday. No works shall take place outside of these hours or on Sundays or Bank Holidays, except in exceptional circumstances where prior written approval has been received from the PA.
- Amend Condition no.21 to correct a clerical error which required the same surveys in (i) & (ii), and it does not take account of the pre-construction surveys already undertaken as per the RFI response.

4.3 Planning Authority response

No response.

4.4 Observers

One letter of observation received from Colm Shaughnessy who raised concerns in relation to: - residential amenity (incl. overlooking, loss of privacy, light intrusion & noise): air pollution (incl. yellow sulphur) & CO_2 emissions; risk of accidents & explosions; ground instability related to underground mines, release of toxins & water pollution; and disturbance during construction phase (incl. noise & traffic).

4.5 EPA (IE Licence) consultations

The EPA response did not raise any new issues of substance over and above those previously raised in its original submission as a Prescribed Body which is summarised in section 3.4 above.

4.6 Further correspondence

The applicant confirmed that an application for a review and/or amendment to the EPA IE Licence would be made in due course.

5.0 POLICY CONTEXT

5.1 European Policy

Large Combustion Plant Directive (2001/80/EC)

This Directive requires reductions in emissions of acidifying pollutants, particles and ozone precursors. The various emission limit values are based licence dates.

Renewable Energy Directive (2009/28/EC [REDI])

This Directive requires a commitment to produce energy from renewable sources and it set national binding targets on the share of renewable energy in energy consumption and in the transport sector to be met by 2020. It aimed to make renewable energy sources account for 20% of EU energy by 2020. Ireland had a national target of 16%. The government decided that 40% of electricity consumed in 2020 would be generated by renewables sources. Members States must submit National Renewable Energy Action Plans and Progress Plans to the EC.

Recast Renewable Energy Directive (Revision 2018/2001 [REDII])

This revision of REDI requires that the EU 2030 target for the share of renewable energy consumed in Member States should be at least 27%, and it established a binding target of at least 32% of renewable energy for the EU by 2030. Member states are required to establish their contribution to the achievement of that target as part of their integrated national energy and climate plans.

Energy Roadmap 2050

This 2011 Roadmap deals with the transition of the energy system in ways that would be compatible with the greenhouse gas reductions targets set out in REDI.

5.2 National Policy

Government White Paper – Ireland's Transition to a Low Carbon Energy Future, 2015 - 2030

Sets out a framework to guide Ireland's energy policy development and actions.

White Paper: Ireland's Transition to a Low Carbon Energy Future, 2015-2030

Sets out a framework to guide policy and the actions intended to take in the energy sector up to 2030. It takes into account European and International climate change objectives and agreements, as well as Irish priorities.

Climate Action and Low Carbon Development (Amendment) Act, 2021

Establishes a framework to develop the national transition towards a low carbon economy. Ireland must achieve net zero emissions by 2050 (climate neutrality) and a 51% reduction in emissions by 2030 relative to 2018 levels. The Act requires the development of 5-year carbon budgets and sectoral emissions ceilings.

Climate Action Plan, 2021

Seeks to tackle climate breakdown and it commits Ireland to a legally binding target of net-zero greenhouse gas emissions by 2050, an emissions reduction of 51% and to meet up to 80% of electricity demand form renewables by 2030. The Plan states that in order to meet the required level of emissions reduction by 2030 Ireland must "Deliver c.2GW of new flexible gas fired power stations in support of a high variable renewable electricity system".

National Planning Framework, 2018-2040

Sets out a high-level strategic plan for shaping future growth and development to 2040. It seeks to develop a region-focused strategy to manage growth and environmentally focused planning at a local level. It contains several National Strategic Outcomes (NSOs) and National Policy Objectives (NPOs) related to

transitioning to a low-carbon and climate resilient society (NSO8), protecting the environment (NPO52), supporting national targets or emissions reductions through supporting renewables (NPO54), promoting renewable energy use (NPO55), and improving air quality (NPO64).

National Development Plan, 2021-2030

This Plan underpins the National Planning Framework. It contains several priorities related to transitioning to a low-carbon and climate resilient society (NSO8) including investment in renewable energy infrastructure.

Policy Statement in the Security of Electricity Supply, November 2021

Circular Letter PL12.2021 seeks to ensure security of electricity supply which is at short to medium term risk due to lower than expected availability of some existing power stations, expected growth in electricity and the expected closure of some power stations. It states that the development of new conventional generation (incl. gas-fired & gasoil/distillate-fired generation) is a national priority and should be permitted and supported, which will ensure security of electricity supply and facilitate the target of up to 80% renewable electricity generation by 2030. The Policy Statement builds on policies set out in the National Development Plan and the Climate Action Plan 2021, which target the development of c.2GW of flexible gas-fired generation capacity.

National Energy Security Framework, April 2022

Sets out the Government's response to the impacts of the war in Ukraine on the energy system in Ireland. Paragraph 2.3.3 (Electricity) states that "The level of dispatchable electricity generation capacity (i.e capacity that does not rely on wind or solar energy) needs to increase significantly over the coming years due to the reduced reliability of existing plants, anticipated new power stations not being developed as planned, expected strong growth in demand for electricity, and the closure of existing generation."

5.3 Regional Policy

Regional Spatial & Economic Strategy for the N & W Region 2020-32

The RSES supports the delivery of the programme for change set out in the National Planning Framework and the National Development Plan and it sets out a strategic vision and policy objectives for the Northern and Western Region. It seeks to promote quality infrastructure provision and capacity improvement in tandem with new development aligned with national projects and improvements in water and wastewater, sustainable energy, waste management and resource efficiency. It seeks to reduce emissions and support the transition to a low carbon region by 2050.

5.4 Local Policy

County Galway Development Plan 2022 - 2028

Strategic Aims:

- To reduce CO_2 emissions by achieving international, national, regional and any local targets for achieving a low carbon economy by 2050.
- To promote the sustainable development of the County.
- To reduce dependency on imported fossil fuels and to provide alternative energy sources.

Energy Policy objectives:

CC 1: seeks to support and facilitate the implementation of European, National and Regional objectives for climate adaptation and mitigation taking into account other provisions of the Plan (incl. those relating to land use planning, energy, sustainable mobility, flood risk management & drainage) and having regard to the Climate mitigation and adaptation measures.

CC 2: seeks to transition to a low carbon, climate-resilient and environmentally sustainable economy by 2050, by way of reducing greenhouse gases, increasing renewable energy, and improving energy efficiency.

CC 3: seeks to implement the County Climate Adaptation Strategy as appropriate.

CC 4: seeks to support the preparation of a Climate Action Plan for the County.

CC 5: seeks to promote, support & direct effective climate action policies/objectives.

CC 6: seeks to support the implementation of the Renewable Energy Strategy.

CC 7: seeks to support the delivery of sustainable development projects.

SEVESO Policy objectives

MAS 1: Separation Distances from SEVESO Sites.
MAS 2: Soil Protection Measures at SEVESO Sites.
MAS 3: Take into account the provisions of the Major Accidents Directive, relating to the control of major accident hazards involving dangerous substances, and the recommendations of the HSA in the assessment of all planning applications located within the consultation distance of such sites.
Seveso Establishment: Tynagh power station is regulated as a Lower Tier site.

Landscape Character Assessment:

The site is located in the extensive Central Galway Complex Landscape and within the Kilcrow Basin Unit which is described as a "working landscape, locally elevated" classified as being of "Low" landscape sensitivity.

Other policies & objectives:

AQ 1/2/3: deals with protecting, monitoring & improving air quality.

NP 1-5: deals with protecting noise quality in line with good practice & legislation.

Chapter 8: contains policies for protecting sensitive landscapes & views.

Chapter 10: contains policies for protecting natural heritage and & biodiversity.

Chapter 12: contains policies for protecting archaeology, built & cultural heritage.

Chapter 14: deals with climate change, energy and renewable resources.

County Galway Climate Adaptation Strategy 2019-2024

This Plan contains measures to improve energy efficiency & reduce emissions.

5.5 European site designations

The following European sites lies within a c.15km radius.

Lough Derg, N-E Shore SAC	Ardgraigue Bog SAC
River Shannon Callows SAC	Lough Rea SAC
Pollnaknockaun Wood Nature Reserve SAC	
Derrycrag Wood Nature Reserve SAC	Slieve Aughty Mountains SPA
Cloonmoylan Bog SAC	Lough Derg (Shannon) SPA
Rosturra Wood SAC	Middle Shannon Callows SPA
Barroughter Bog SAC	Lough Rea SPA

6.0 PLANNING ASSESSMENT

6.1 Principle of development

This section should be read in conjunction with Section 7.0 below (Environmental Impact Assessment) and in particular Section 7.6 (Air & Climate).

The project would comprise the installation of an Open Cycle Gas Turbine (OCGT) electricity generating plant (299MW) within and adjacent to an existing Combined Cycle Gas Turbine (CCGT) power generating plant (400MW) at the Tynagh Power Station complex. The power station operates under an existing EPA Industrial Emissions (IE) Licence which would be reviewed and/or amended. The main elements include the installation of 1 x OCGT generating unit and 1 x 40m high emissions stack (and all associated plant), and the proposed generator would be connected to an underground gas storage facility within the site.

The project has been specifically designed as a "Peaking Plant" to respond quickly to shortfalls in power generation at times of high demand during the country's transition from fossil fuel to renewable energy generation. According to the EIAR, the facility will operate for up to 1,500 hours per annum (c.4 hours per day), on a 5-year rolling average in line with EU BAT, subject to compliance with the terms and conditions of the EPA Industrial Emissions Licence. It would be decommissioned in 2049.

The relevant European, national, regional, and local policies and objectives are set out in section 5.0 above. National policy seeks to tackle climate breakdown. The Climate Action Plan, 2021 commits Ireland to a legally binding target of net-zero greenhouse gas emissions by 2050, an emissions reduction of 51% and to meet up to 80% of electricity demand form renewables by 2030. The Action Plan also states that in order to meet the required level of emissions reduction by 2030, Ireland must "Deliver c.2GW of new flexible gas fired power stations in support of a high variable renewable electricity system". The Policy Statement on the Security of Electricity Supply, 2021 seeks to ensure security of electricity supply, and states that the

development of new conventional generation (incl. gas-fired & gas/oil/distillate-fired generation) is a national priority and should be permitted and supported. This will ensure security of supply and facilitate the target of up to 80% renewable electricity generation by 2030. It builds on policies set out in the Climate Action Plan, which target the development of c.2GW of flexible gas-fired generation capacity.

The current Galway County Development Plan contains several policies related to the protection of air quality and reduction in greenhouse gas emissions, and for the transition to sustainable forms of renewable energy generation. In particular, Policy CC2 seeks to transition to a low carbon, climate-resilient and environmentally sustainable economy by 2050, by way of reducing greenhouse gases, increasing renewable energy, and improving energy efficiency. The current Galway County Development Plan also contains a variety of policies for the protection of residential and visual amenity, human health and air quality, along with traffic management, and compliance with these policies will be addressed in Section 7.0 below (EIA).

The potential impact of the proposed development on the achievement of European, national, regional, and local policies is addressed in Section 7.0 below (Environmental Impact Assessment). Section 7.6 deals with Air and Climate, and section 7.6.5 specifically deals with Climate and the achievement of climate change and carbon emission reduction targets, mainly during the operational phase, and it contains a detailed breakdown of predicted emissions (annual, 5-yearly and 25-year lifespan). It is intended that the facility would only be used during emergency situations in order to provide security of supply and to avoid power outages, pending the future connection of several renewable energy generating facilities to the national grid, along with the reconnection of existing recommissioned facilities that have undergone repair and upgrade works.

Having regard to:

- National policy which identifies a need to deliver c.2GW of new flexible gas fired power stations in order to facilitate the target of up to 80% renewable electricity generation by 2030,

- The overall justification and need for the facility which would provide backup electricity generation to the national grid in order to avoid power outages, and to ensure security of electricity supply,
- Combined with the nature of the facility which would not operate for more than an average of 1,500 hours per year (on a 5-year rolling period), and over a stated 25-year time frame, as and when needed, subject to compliance with the terms and conditions of the EPA Industrial Emissions Licence.

I am satisfied, on balance, that any adverse impacts on climate would be localised, strategically short term and transitionary, but not significant when considered as part of the evolving energy supply network which is transitioning towards a greater reliance on renewables, in line with EU and National policy, and the contribution the proposed development would make to the achievement of the overall objective of Net Zero CO_2 emissions by 2050.

In conclusion, and having regard to the foregoing, I am satisfied that the proposed development would be compatible with EU and National planning, environmental, energy and climate change policy, notwithstanding the predicted increase in CO_2 emissions over its 25-year operational lifespan resulting from the transitional use of natural gas to generate electricity for connection to the national grid.

6.2 Other issues

All other issues related to visual and residential amenity, the environment, biodiversity, traffic and movement, environmental services and cultural heritage are addressed in section 7.0 of this report (EIA).

7.0 ENVIRONMENTAL IMPACT ASSESSMENT

7.1 Introduction

This section of the report deals with the potential environmental impacts of the proposed development during the construction, operational and decommissioning phases. An EIA is required for proposed developments with a thermal output greater than the 300MW threshold (EIA Directive, Annex 1 and Schedule 5 Part 1 of the P&D Regs). The proposed development would have stated thermal output of 299MW. The applicant submitted an EIAR on the basis that the proposed development is sub-threshold having regard to the characteristics of the project and potential impacts on the receiving environment.

This section should be read in conjunction with Section 6.0 (Planning Assessment) and Section 8.0 (Screening for Appropriate Assessment).

7.2 Compliance legislative requirements

Directive 2011/92/EU was amended by Directive 2014/52/EU. The applicant has submitted an Environmental Impact Assessment Report (EIAR) which is presented in a 'grouped format' comprising the following:

- Non-Technical Summary
- Main Statement
- Technical Appendices

It is submitted by the applicant that the EIAR has also been prepared in accordance with the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 that came into effect on 1st September 2018, and which the Board will be aware, transposed Directive 2014/52/EU into Irish planning law. As is required under Article 3(1) of the EIA Directive 2011/92/EU amended by Directive 2014/52/EU, the EIAR identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and

Directive 2009/147/EC; (c) land, soil, water, air and climate; (d) material assets, cultural heritage and the landscape and it equally considers the interaction between the factors referred to in points (a) to (d).

I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR and supplementary information provided by the applicant, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU.

I am satisfied that the information contained in the EIAR complies with article 94 of the Planning and Development Regulations 2000, as amended, and the provisions of Article 5 of the EIA Directive 2014. I have carried out an examination of the information presented by the applicant, including the EIAR and FI response, and the submissions made during the course of the application and the issues raised in the Third-Party appeal. A summary of these issues and the applicant's response to same has been set out in Sections 3.0 and 4.0 of this report.

The EIAR describes the proposed development, including information on the site, the existing operational energy facility and the proposed OCGT generator. A description of the main alternatives studied by the applicant and alternative locations considered, is provided and the reasons for the preferred choice. The impact of the proposed development was assessed under all the relevant headings with respect to population and human health; noise, air and climate; biodiversity; landscape; land, geology and soils; hydrology and hydrogeology; roads and traffic; material assets and cultural heritage; interactions of impacts; and the suggested mitigation measures are set out at the end of most chapters.

The content and scope of the EIAR is in compliance with Planning Regulations. No likely significant adverse impacts were identified in the EIAR following mitigation.

7.3 Consideration of Reasonable Alternatives

The consideration of reasonable alternatives was considered in Section 3.0 of the EIAR. The proposed development would comprise the installation of an OCGT electricity generator at an existing operational energy facility. The Alternatives considered related to Alternative Site Locations, Alternative Technical Solutions, Alternatives Layouts, and the Do-Nothing Alternative. It concluded that the proposed installation of the generators at the existing facility would be the most sustainable option compared with the alternatives, having regard to its location within an existing energy generating, availability of fuel and proximate connection to the national grid.

7.4 Likely Significant Effects

The EIA identifies and summarises the likely significant effects of the proposed development on the environment with respect to several key receptors in the receiving environment. It identifies the main mitigation measures and any residual impacts following the implementation of these measures together with any recommended conditions, and it reaches a conclusion with respect to each of the receptors. It assesses cumulative impacts, identifies interactions between the receptors, and considers the risks associated with major accidents and/or disasters. The EIA reaches a Reasoned Conclusion.

The EIA comprises the following sections:

- Population and Human Health
- Air and Climate
- Landscape
- Biodiversity
- Land soil and water
- Material assets
- Cultural heritage

7.5 Population and human health

7.5.1 Project description

The proposed development is described in detail in section 2.2 above. The project would comprise the installation of an Open Cycle Gas Turbine (OCGT) electricity generating plant (299MW) within and adjacent to the existing Combined Cycle Gas Turbine (CCGT) power generating plant (400MW) at Tynagh Power Station complex. The power station operates under an existing EPA Industrial Emissions (IE) Licence which would be reviewed and/or amended. The main elements of the project include the installation of: - 1 x OCGT unit, 1 x 40m high emissions stack and associated secondary fuel storage and transfer facility; above ground installation connection equipment expansion; connection to the on-site electrical substation; along with acoustic barriers and a revised internal road layout. Some of the existing structures would be demolished and relocated. The “Peaking Plant” project has been designed to respond quickly to shortfalls in power generation at times of high demand during the transition from fossil fuel to renewable energy generation. The facility will operate for up to 1,500 hours per year (over a 5-year rolling average), subject to compliance with the terms and conditions of the EPA Industrial Emissions Licence. The proposed works would take approximately 18-24 months to complete, the project will have a stated operational lifespan on 25 years, and it will be decommissioned in c.2049.

7.5.2 Locational context

The site and surroundings are described in detail in section 1.4 above. The proposed OCGT generator would be located within and adjacent to the existing Tynagh Power Station which comprises a series of existing buildings, structures, substations and underground gas storage facilities related to the generation and supply of electricity to the national grid. The existing power plant is located within a section of the former Tynagh lead and zinc mining complex, and the site is surrounded by the remaining mining lands and tailing ponds, with agricultural fields beyond. The neighbouring Sperrin Galvanisers is located to the immediate W. Tynagh Village is located c.1.5km to the SE and there are several detached dwelling houses, farm buildings

and an equestrian centre in the surrounding area. Vehicular access to the site is via the existing entrance off the local Tynagh road to the W.

7.5.3 Applicant's submission

EIAR sections 7, 10, 11, 14 and 16, associated Technical Appendices and the Further Information response dealt with air quality, climate, visual amenity, noise and vibration, roads and traffic, and population and human health. The EIAR described the receiving environment and existing electricity generating facility. It identified potential impacts on human beings, human health, air quality, employment, local amenities and health and safety. The EIAR did not predict any significant adverse impacts on human beings, population or human health during the construction and operational phases subject to the implementation of mitigation measures related to the management of construction works and the operation of the facility.

7.5.4 Policy context

The relevant European, national, regional, and local policies and objectives are set out in section 5.0 above. The current Galway Development Plan contains a variety of polices for the protection of residential and visual amenity, human health and air quality, along with traffic management.

7.5.5 Assessment

The Third Party Appellant (An Taisce) and the Observer (Colm Shaughnessy), along with several member of the public (during the planning application process), raised concerns in relation to population and human health in their written submissions. The concerns raised and the Applicant's response to them are summarised in sections 3.0 and 4.0 above. There is potential for the following impacts on human beings during the construction, operational and decommissioning phases of the proposed development associated with an increase in airborne emissions from the construction works and the operation of the facility, along with construction related noise, dust and traffic movements, and possible visual intrusion.

Air quality:

There is potential for adverse impacts on air quality during all phases of the proposed development. These would be associated with an increase in airborne emissions from the construction works (incl. traffic), the operation of the gas burning facility, and its future decommissioning, on the surrounding residential uses to the N and SE of the site, and along the main construction vehicle delivery route.

Any potential negative ***construction phase*** emission impacts (incl. vehicle emissions, dust & particulate matter) would be mitigated by adherence to the measures contained in the final CEMP, including the implementation of best construction practices. The combined site preparation and construction works are predicted to take approximately 18 to 24 months to complete so any adverse impacts would be temporary and of a short duration. Furthermore, the proposed development would be located within an existing and established industrial complex which is at a far remove from any residential areas (incl. existing, under construction & permitted dwelling houses), and any construction phase dust would normally dissipate up to c.50m from source. Any negative traffic emission impacts associated with the delivery of construction materials and project components, and the removal of demolition and associated waste from the site would be managed by the final CEMP (incl. a traffic management plan). The distribution of traffic away from Tynagh Village and routing it via the M6 or M7, and N65 to the N, would in turn enhance safety and reduce NO_x and NO_2 emissions in more built-up areas.

Any potential negative ***operational phase*** emission impacts arising from the combustion of natural gas and the generation of electricity on an intermittent basis for no more than an average of 1,500 hours per year over a stated 5-year period (in line with EU BAT), would be managed and monitored by the EPA Industrial Emissions Licence (as reviewed and/or amended), mitigated by adherence to the measures contained in the EIAR and final CEMP. Sampling and analysis of pollutants would be carried out under the terms of the IE Licence, and exhaust emission levels from the stack would be monitored by a Continuous Emissions Monitoring System (CEMS). The EIAR states that emissions will meet IED

requirements for NO_x and NO_2. Refer to section 7.6 of this report for a detailed analysis of climate impacts (inc. GHG emissions).

Emissions will remain within the limits set in the EPA IE Licence after the proposed generating facility becomes operational with no exceedance of air quality standards or adverse impacts on local air quality anticipated. The existing energy generating facility operates within the IE Licence limit values for all metrics including the worst-case scenario (incl. NO_x, NO_2 & CO) as described the air quality assessments contained in Chapter 7 of the EIAR. The modelling exercises concluded that an exceedance of air quality objectives and standards as a result of the proposed development would not occur, either on its own or in-combination with other projects in the surrounding area. Having examined the various EIAR air quality emissions and dispersion modelling exercises, which have been carried out in line with relevant guidance, I am satisfied that both the models and the resultant conclusions are robust. Furthermore, given that the combustion of natural gas is relatively odourless, I am satisfied that the proposed development would not give rise to unacceptable odours during the operational phase.

Potential adverse emissions impacts during the ***decommissioning phase*** would be similar to or less than during the construction phase as would be no delivery of construction materials to the site.

***Noise & vibration*:**

There is potential for minor disturbance during the ***construction, operational and decommissioning phases***. However, having regard to the industrial location within the former Tynagh Mines complex which is currently occupied by the existing Tynagh Power Station (which operates under an IE licence) and Sperrin Galvanisers (which operates under an IPPC licence), and the substantial separation distances to the nearest residential properties to the N and SE (incl. existing, under construction & permitted), I am satisfied that the proposed development would not have any significant effects during any of the phases. Noise emissions would not significantly exceed the prevailing ambient noise levels within the industrial area or at the nearest sensitive receptors, including the nearby house that is under construction. There would be no significant additional noise during the operational phase having regard

to the design of the facility, which would include the procurement of quieter plant and the provision of an acoustic wall.

Having examined the various EIAR noise and vibration modelling exercises, which have been carried out in line with relevant guidance (incl. various EPA guidance notes), I am satisfied that both the models and the resultant conclusions are robust. However, a planning condition should be attached to manage the operational hours of the construction phase of the works in the interests of protecting residential amenity, subject to the amendment proposed by the applicant in relation to some out of hours work (incl. concrete pouring).

Traffic:

There would be potential for minor localised impacts on air quality, road safety and residential amenity during the ***construction phase*** and along the haul route related to disturbance from the additional construction vehicles that would deliver materials to and remove demolition and associated waste from the site during the estimated 18 to 24 month construction phase. Refer to section 7.10 of this report for a detailed analysis of movement and traffic impacts. Given the industrial location of the proposed development within the existing Tynagh Power Plant which occupies a Seveso site, it is unlikely that emissions from construction phase traffic would have a significant adverse effect on air quality. The national, regional and local road network has sufficient capacity to assimilate the additional traffic volumes associated with the increase in construction phase HGVs subject to compliance with the EIAR an final CEMP mitigation measures related to traffic management. Any temporary short duration negative traffic impacts would be mitigated by the distribution of traffic away from Tynagh Village to the SE and routing construction vehicles via the M6 or M7 and N65, which would in turn improve safety and reduce NO_x and NO_2 emissions in more built-up areas around the village. There would be no discernible traffic related emission impacts during the ***operational phase.*** Potential adverse impacts during the ***decommissioning phase*** would be less than during the construction phase as would be no delivery of construction materials to the site.

Health & safety:

There is potential for adverse impacts on health and safety from on-site accidents and road traffic accidents. On-site accident concerns are and would continue to be addressed by way of compliance with all relevant health and safety legislation.

Residential amenity:

Tynagh Village is located c.1.5km to the SE of the site and there are several detached houses and farm buildings located along the local road network to the N and S of the site (incl. a house that is currently under construction). Given that the proposed development would be located within an existing and long-established industrial area within the former Tynagh Mines complex and having regard to the substantial separation distances to the nearest sensitive residential receptors (incl. existing, under construction & permitted), there would be no adverse impacts on any residential amenity in terms of overlooking, overshadowing, loss of privacy or visual intrusion during any phase of the project. Issues related to air quality, traffic safety and the landscape, along with any resultant impacts on residential amenity are addressed in the other sections of this report.

7.5.6 Conclusions

Residual Effects: There will be some increase in airborne emissions from the chimney stacks during the operational phase, however predicted emission levels are within guidance limit values and will be subject to compliance with the EPA IE Licence (as reviewed and/or amended). Residual impacts are not predicted to be significant subject to the implementation of mitigation measures.

Cumulative Impacts: Minor impacts may occur in-combination with existing plans and projects within the industrial location, including the existing Tynagh Power Station, but none are predicted to be significant.

Conclusion: The submissions made in relation to population human health are noted. I have identified the relevant issues in this section of the report, and I am satisfied that they have been appropriately addressed in terms of the application, and that no significant adverse effect is likely to arise.

7.6 Air and climate

7.6.1 Project description

The proposed development is described in detail in section 2.2 above. The project would comprise the installation of an Open Cycle Gas Turbine (OCGT) electricity generating plant (299MW) within and adjacent to an existing Combined Cycle Gas Turbine (CCGT) power generating plant (400MW) at the Tynagh Power Station. The power station operates under an existing EPA Industrial Emissions (IE) Licence which would be reviewed and/or amended. The main elements include the installation of 1 x OCGT generating unit and 1 x 40m high emissions stack (and all associated plant), and the proposed generator would be connected to an existing gas supply within the site via a c.154m long pipe. The project has been specifically designed to respond quickly to shortfalls in power generation at times of high demand during the country's transition from fossil fuel to renewable energy generation. The facility will operate for up to 1,500 hours per year on a stated 5-year rolling average (in line with EU BAT), subject to compliance with the terms and conditions of the EPA Industrial Emissions Licence (as reviewed and/or amended). There would be an increase in vehicular traffic during construction with no discernible increase during the operational phase. The proposed works (incl. site preparation & construction) would take approximately 18-24 months to complete, the facility will have a stated 25-year lifespan, and it will be decommissioned in c.2049.

7.6.2 Locational context

The site and surroundings are described in detail in section 1.4 above. The proposed OCGT generator would be located within and adjacent to the existing Tynagh Power Station Power which comprises a series of existing structures related to the generation and supply of electricity to the national grid. The existing power plant is located within a section of the former Tynagh lead and zinc mining complex, and the site is surrounded by the remaining mining lands and tailing ponds, with agricultural fields beyond. The neighbouring Sperrin Galvanisers is located to the immediate W. Tynagh Village is located to the SE and there are several detached dwelling houses, farm buildings and an equestrian centre in the surrounding area. Vehicular access to the site is via the existing entrance off the local Tynagh road to the W.

7.6.3 Applicant's submission

EIAR sections 7, 9, 14 and 16, associated Technical Appendices and the Further Information response dealt with air quality, climate, biodiversity, traffic movements and human health. The EIAR described the receiving environment, and the existing and proposed electricity generating facilities. It identified potential impacts on human beings, air quality, climate and biodiversity. The EIAR did not predict any significant adverse impacts on air quality during the construction, operational or decommissioning phases subject to the implementation of construction phase mitigation measures and compliance with the EPA IE Licence operational requirements. There would be an increase in greenhouse gas emissions during the operational phase, which would result in a significant, adverse impact on climate. However, given the interim and transitionary nature of the project which would operate on a "needs-be" basis to maintain security of supply during periods of peak demand, the EIAR concluded that the overall impacts on Air and Climate would not be significant in the long term.

7.6.4 Policy context

The relevant European, national, regional, and local policies and objectives are set out in section 5.0 above. National policy seeks to tackle climate breakdown. The Climate Action Plan, 2021 commits Ireland to a legally binding target of net-zero greenhouse gas emissions by 2050, an emissions reduction of 51% and to meet up to 80% of electricity demand form renewables by 2030. The Action Plan also states that in order to meet the required level of emissions reduction by 2030, Ireland must "Deliver c.2GW of new flexible gas fired power stations in support of a high variable renewable electricity system". The Policy Statement on the Security of Electricity Supply, 2021 seeks to ensure security of electricity supply, and states that the development of new conventional generation (incl. gas-fired & gasoil/distillate-fired generation) is a national priority and should be permitted and supported. This will ensure security of supply and facilitate the target of up to 80% renewable electricity generation by 2030. It builds on policies set out in the Climate Action Plan, which target the development of c.2GW of flexible gas-fired generation capacity.

The current Galway County Development Plan contains several policies related to the protection of air quality and reduction in greenhouse gas emissions, and for the transition to sustainable forms of renewable energy generation. The Plan also contains a variety of policies for the protection of residential and visual amenity, human health and air quality, along with traffic management. In particular Policy CC2 seeks to transition to a low carbon, climate-resilient and environmentally sustainable economy by 2050, by way of reducing greenhouse gases, increasing renewable energy, and improving energy efficiency, and Policies AQ1, AQ2 and AQ3 deal with protecting, monitoring and improving air quality.

7.6.5 Assessment

The Third Party Appellant (An Taisce) and the Observer (Colm Shaughnessy), along with several members of the public (during the planning application process), raised several concerns in relation to the achievement of EU and National climate change policies and targets, and potential impacts on air quality. The EPA noted that any increase in emissions would fall with its licencing remit. The remaining Prescribed Bodies did not raise any concerns in relation to air and climate in their written submissions. The concerns raised and the Applicant's response to them are summarised in sections 3.0 and 4.0 above. There is potential for adverse impacts on air and climate during the construction, operational and decommissioning phases of the proposed development associated with an increase in airborne emissions from the construction works and the operation of the facility (incl. the gas turbine), along with construction related traffic movements.

Air quality:

Refer to section 7.5 above and section 7.8 below for a specific assessment of the potential adverse impacts on air quality relative to human beings and biodiversity during the construction, operational and decommissioning phases (incl. dust, particulate matter, traffic & operational airborne emissions). Any potential negative ***construction*** and ***decommissioning phase*** emission impacts arising from the physical works (incl. demolition, excavation & construction), and related transport movements would be mitigated by adherence to the measures contained in the final EIAR and CEMP. Any potential negative ***operational phase*** airborne emission

impacts on air quality arising from the combustion of natural gas would be managed and monitored by the EPA Industrial Emissions Licence (as reviewed and/or amended), and the mitigation measures inherent in the design of the proposed facility.

Climate:

The proposed development has the potential to have a significant adverse impact on the achievement of EU and National climate change and carbon emission reduction targets, mainly during the ***operational phase***. The main source of operational greenhouse gas (GHG) emissions from the proposed energy facility would be from the combustion of natural gas and the consequent release of Carbon dioxide (CO_2) into the atmosphere, followed to a lesser extent by potential leakages of Sulphur hexafluoride (SF_6) from any gas insulated switchgear or other equipment.

The total CO_2 emissions (as corrected in the Applicants response submission) have been calculated for the proposed development as follows, and they fall within the 1% band for sectoral emissions over the stated 25-year lifespan of the project, which would bring it up to the target year of 2050 for Net Zero emissions: -

- Total annual emissions: 237,146 tCO_{2e}
- Total 5-year emissions: 1,185,730 tCO_{2e}
- Total 25-year emissions: 5,928,649 tCO_{2e}
- Percentage emissions: 1.00%

It is intended that the facility would only be used during emergency situations in order to provide security of supply and to avoid power outages, pending the future connection of several renewable energy generating facilities to the national grid, along with the reconnection of existing recommissioned facilities that have undergone repair and upgrade works. It is also noted that the generating plant would not operate for a consistent number of hours per year, depending on demand. It is estimated that an average of c.237,146 tCO_{2e} would be emitted each year under circumstances where the turbine would operate at peak for an average of 1,500 hours per year. However, this calculation is based on a rolling average over 5 years (1,185,730 tCO_{2e}) with an EIAR stated maximum annual operational allowance of

2,250 hours per year (subject to compliance with the terms and conditions of the EPA Industrial Emissions Licence). This could result in higher CO_2 emission rates for some years during each 5-year period, but also lower rates for other years within each time period. However, it is likely that the fluctuating operational average hours per year will eventually even out as the transition to renewables gains momentum in the coming years, and the resultant CO_2 emissions would be correspondingly reduced, subject to compliance with the terms and conditions of the EPA Industrial Emissions Licence (as reviewed and/or amended).

Notwithstanding this, I note that the Institute of Environmental Management and Assessment (IEAM) guidance on assessing GHG emissions advises that all GHG emissions should be considered significant, regardless of the scale of the emissions. Given that the operational facility will result in additional CO_2 emissions to the atmosphere, the impact of the proposed development on climate would be significant and adverse, with resultant knock-on effects for EU and National climate change and carbon emission reduction targets.

Notwithstanding this concern, and having regard to: -

- National policy which identifies a need to deliver c.2GW of new flexible gas fired power stations in order to facilitate the target of up to 80% renewable electricity generation by 2030,
- The overall justification and need for the facility which would provide backup electricity generation to the national grid in order to avoid power outages, and to ensure security of electricity supply,
- Combined with the nature of the facility which would not operate for more than an average of 1,500 hours per year on a 5-year rolling period (in line with EU BAT), and over a stated 25-year time frame, as and when needed, subject to compliance with the terms and conditions of the EPA IE Licence.

I am satisfied, on balance, that any adverse impacts on climate would be localised, strategically short term and transitionary, but not significant when considered as part of the evolving energy supply network which is transitioning towards a greater

reliance on renewables, in line with EU and National policy, and the contribution the proposed development would make to the achievement of the overall objective of Net Zero CO_2 emissions by 2050.

Cumulative impacts:

Emissions from the existing and proposed energy facilities would operate within the terms of an EPA IE licence as reviewed and/or amended, and as such would be subject to ongoing and periodic monitoring. The proposed development would not give rise to any other significant adverse cumulative impacts in-combination with other plans or projects in the surrounding and wider area, other than the existing Tynagh Power Station stack emissions. It is noted that the emissions from the adjacent Sperrin Galvanisers plant, which operates under an EPA IPPC licence, are dissimilar from the stack emissions from the existing and proposed energy facilities, with few or any in-combination effect anticipated.

Life cycle impacts:

The concerns raised by the Appellant in relation to the consideration of cumulative life cycle impacts, including the excavation and processing of raw materials through to the transport of components to the Tynagh site are noted, but I am satisfied that these concerns lie outside the scope of this environmental impacts assessment. Further concerns on relation to built-in obsolescence with regard to the stated 25-year life span of the facility are also noted, however this concern also lies outside the scope of this assessment, as does the any future conversion to Hydrogen as a fuel.

Conclusion

Having regard to the foregoing and based on my assessment of the site and surrounding area, I am satisfied that the proposed development would not have an unacceptable nor unjustified adverse impact on air quality and climate, subject to the implementation of EIAR mitigation measures and compliance with the terms and conditions of the EPA IE Licence (as reviewed and/or amended). The proposed development would not give rise to any significant adverse local or cumulative impacts in-combination with other developments in the surrounding and wider area.

7.6.6 Conclusions

Residual Effects: There will be some increase in airborne emissions from the chimney stack during the operational phase, however predicted emission levels from are expected to be within guidance limit values and will be subject to compliance with the EPA IE Licence (as reviewed and/or amended). Residual impacts are not predicted to be significant subject to the implementation of EIAR mitigation measures and having regard to the transitionary nature of the proposed facility which would operate for no more than 1, 500 hours per year on average, over a 5-year rolling average (in line with EU BAT), as and when required.

Cumulative Impacts: Minor impacts may occur in-combination with existing plans and projects at the industrial location, including the existing Tynagh Power Station, but none predicted to be significant.

Conclusion: I have considered all the written submissions made in relation to air and climate, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.

7.7 Landscape and Visual Amenity

7.7.1 Project description

The proposed development is described in detail in section 2.2 above. The project would comprise the installation of an OCGT generating plant within and adjacent to Tynagh Power Station. The existing station contains a range of buildings of varying heights and designs along with a c.55m high emissions stack. The main elements of the project with the potential to affect the landscape and rural visual amenity include the installation of the air intake structure, the emissions stack (40m high) and the 4 x bunded distillate fuel storge tanks (20m high x 10m diameter). The proposed works (incl. site preparation & construction) would take approximately 18-24 months to complete, the facility will remain in situ and have a stated 25-year lifespan, and it will be decommissioned in c.2049.

7.7.2 Locational context

The site and surroundings are described in detail in section 1.4 above. The proposed development would be located within a gently undulating rural area to the NW of Tynagh Village which contains a number of community facilities (incl. sports grounds), and there are several detached houses, farm buildings and an equestrian centre in the surrounding area. The project would be located within and adjacent to the existing Tynagh Power Station which is located within a section of the former Tynagh Mines complex. The surrounding lead and zinc mining lands, which contain tailing ponds, are low-lying, flat and mainly barren. The rural area beyond the former mine complex is characterised by agricultural fields which are defined by hedges and trees and it is traversed by overhead transmission cables which connect to the Tynagh power station. The existing power station site comprises a series of buildings and structures of various heights, along with 1 x c.55m high emission stack, and the neighbouring low-rise Sperrin Galvanisers plant is located to the immediate W. The existing emissions stack is intermittently visible from along the surrounding road network to the N, S E and W, and from Tynagh Village.

7.7.3 Applicant's submission

EIAR section 10 and associated technical appendices which include a Landscape and Visual Impact Assessment (LVIA) and Photomontages assessed the potential impacts on the landscape and visual amenity during the construction, operational and decommissioning phases. The EIAR was informed by desk studies and site appraisals. It described baseline conditions (incl. the existing operational energy facility, industrial environs & wider rural area), noted the absence of any nearby sensitive landscape designations, and described the scale, height and extent of the proposed development. It assessed potential impacts (incl. cumulative) on the landscape and views from several locations within a core 5km radius of the site and beyond (incl. Tynagh Village & surrounding roads), and it established a Zone of Theorical Visibility (ZTV) for a 10km radius of the existing and proposed emissions stacks. It concluded that the facility would be intermittently visible from a number of locations. It predicted temporary adverse impacts on visual amenity but none of significance, having regard to the short-term temporary nature of the construction works, and the location of the facility within an existing industrial area.

7.7.4 Policy context

The relevant European, national, regional, and local policies and objectives are set out in section 5.0 above. The current Galway County and neighbouring Development Plans contain policies for the protection of the landscape, views and visual amenity. The site and environs are not covered by any sensitive landscape designations, and there are no Protected Views or Prospects towards or from the site.

7.7.5 Assessment

The Third Party Appellant (An Taisce) and the Prescribed Bodies did not raise any concerns in relation to the landscape or visual amenity in their written submissions. The Observer (Colm Shaughnessy) raised visual impact concerns, as did several members of the public during the planning application process. The concerns raised and the Applicant's response to them are summarised in sections 3.0 and 4.0 above.

The site, environs and the surrounding undulating rural area are not covered by any sensitive landscape designations and there are no protected views across the lands from within County Galway or the neighbouring counties. The Development Plan Landscape Character Assessment (LCA) notes that the site is located within the extensive Central Galway Complex Landscape and that it forms part of the Kilcrow Basin Unit. This Unit is described as a "working landscape, locally elevated", it is classified as being of "Low" landscape sensitivity and within an area that is unlikely to be adversely affected by change. In terms of sensitive landscapes in the wider area, Slieve Aughty Mountains and Lough Rea are located to the far W of the site and the River Shannon and Lough Derg are located to the far E & S of the site.

There is some potential for visual impacts on the immediately surrounding landscape and residential areas during the ***construction and decommissioning*** phases related to the erection of tall structures (incl. cranes). However, any impacts on visual amenity would be localised and of a short-term temporary duration, with no significant adverse impacts anticipated.

There is potential for visual impacts during the ***operational phase*** having regard to the scale and height of the proposed components (incl. the c.40m high emissions stack). However, the proposed facility would be located in an existing industrial area, which lies within a former mining complex and beside an existing electricity power station, which comprises a range of structures of varying heights and designs (incl. a c.55 high emissions stack). I have visited the site and its environs (incl. Tynagh Village & the surrounding local & regional road network) and I have examined the EIAR's LVIA, ZTV and Viewpoint photomontages. Although the proposed development would be intermittently visible from the public domain along the local road network, and from various viewpoints within Tynagh Village to the SE (incl. the community sports facility), I am satisfied that the visual impact on the surrounding rural landscape and views towards the site would not be significant and that the proposed development would not have any significant adverse impacts on the landscape or visual amenity.

7.7.6 Conclusions Residual Effects:

Residual Effects: None predicted.

Cumulative Impacts: Minor impacts may occur in-combination with the existing Tynagh Power Station emissions stack, but none predicted to be significant.

Conclusion: No submissions were made by the Third Party or Prescribed Bodies in relation to landscape and visual amenity, although the Observer and several local residents (in their written submissions to the planning authority) raised concerns. I have identified the relevant issues in this section of the report, and I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.

7.8 Biodiversity

7.8.1 Project description

The proposed development is described in detail in section 2.2 above. The project would comprise the installation of an OCGT generating plant and associated structures within and adjacent to Tynagh Power Station. The existing power station contains a range of buildings, structures and gas storage facilities (incl. a c.55m high emissions stack) related to the generation of electricity for connection to the national grid via an on-site sub-station and overhead transmission cables. Surface and waste water from the existing facility discharges to a nearby waterbody along the S site boundary. Airborne stack emissions and water discharge outfalls are regulated by the existing EPA IE Licence, which would be reviewed and/or amended.

The main elements of the project with the potential to affect biodiversity during the construction, operational and decommissioning phases include: - site preparation and construction works; operational airborne emissions from the stack (40m high); and the amended wastewater and surface water drainage arrangements. The proposed works (incl. site preparation, excavation, demolition & construction) would take approximately 18-24 months to complete. The facility will operate on a “needs-be” basis for no more than an average of 1,500 hours per year (over a 5-year rolling average) to help ensure security of electricity supply during periods of peak demand and/or outages, during the transition to renewable forms of energy generation. It will have a stated 25-year lifespan and will be decommissioned in c.2049.

7.8.2 Locational context

The site and surroundings are described in detail in section 1.4 above. The proposed development would be located within a gently undulating rural area to the SW of Tynagh Village. The project would be located within and adjacent to the existing Tynagh Power Station which is located within a section of the former Tynagh Mines complex. The surrounding lead and zinc mining lands, which contain tailing ponds, are low-lying, flat and mainly barren, and there is no indication that the lands have been remediated or restored. The rural area beyond the mine is characterised by

agricultural fields which are defined by hedges and trees, and the lands drain to nearby watercourses, and there is a small wooded area to the W of the site.

There are no sensitive ecological sites in the surrounding area. There are several further afield sites (in excess of 6km) which include the: - Slieve Aughty Mountains SPA to the SW; Lough Rea SAC and SPA to the NW; the River Shannon Callows SPA and SAC to the E; and the Lough Derg NE Shore SAC and Lough Derg (Shannon) SPA to the SE. These sites are designated for a range of terrestrial and aquatic habitats, and a variety of bird and waterbird species. There are also several p/NHAs in the wider area that are designated for bogs, watercourses and woodlands, and two nearby watercourses that have Poor ecological status. It possible that the surrounding agricultural fields, nearby wooded area, and the existing buildings within and adjacent to the site, may contain suitable resting, nesting, roosting or foraging habitat for several species of animal (incl. birds & bats).

7.8.3 Applicant's submission

EIAR sections 7, 9, 12, 13 and 15, associated Technical Appendices and the Further Information response dealt with air quality, biodiversity, water, soils and land. The EIAR described the receiving environment and the existing operational and proposed energy generating facilities. It referenced several desk top studies and field surveys that were undertaken (incl. air quality and dispersal modelling from the chimney stacks, water quality monitoring at the outfalls, and ecological surveys). It noted the lack of proximity to European and National sites and the possible presence of protected species in the vicinity (incl. Barn swallow), and an AA Screening report was prepared. The EIAR did not predict any significant adverse impacts on biodiversity during any of the phases, subject to the implementation of construction phase mitigation measures (incl. adherence to the final CEMP), and operational phase measures related to the ongoing management of the facility, monitoring of emissions to air and water, and compliance with the EPA IE licence emissions limits (as reviewed and/or amended).

7.8.4 Policy context

The relevant European, national, regional, and local policies and objectives are set out in section 5.0 above. The Galway County Development Plan contains a variety of policies for the preservation, protection and enhancement of natural heritage and biodiversity. The industrially located site and its immediate former mine environs and surrounding rural area are not covered by any sensitive natural heritage designations. There are several important further afield European and nationally designated sites in the wider area which the Development Plan seeks to protect.

7.8.5 Assessment

The Third Party Appellant (An Taisce) and the Observer (Colm Shaughnessy), along with several members of the public (during the planning application process), raised concerns in relation to potential adverse impacts on biodiversity, including potential impacts on ecosystems, and terrestrial and aquatic habitats and species resulting from additional airborne emissions and water based pollutants. The remaining Prescribed Bodies did not raise any concerns in relation to biodiversity. There is potential for adverse impacts during the construction, operational and decommissioning phases as a result of the proposed demolition, excavation and construction works, amended waste and surface water drainage arrangements, additional construction phase traffic movements, and additional airborne emissions. The proposed facility would be located on made-ground within an established industrial area, that is occupied by energy and industrial uses, and it is surrounded by former lead and zinc mining lands, with agricultural fields beyond. The site and immediate environs do not contain any sensitive or protected habitats, however some of the existing buildings, nearby wooded area and surrounding fields may contain suitable habitat for resting, nesting or foraging mammals, birds, bats and amphibians, and the nearby watercourses may provide suitable support habitat for fisheries. There are several further afield European sites in the wider area.

European and national sites:

Refer to Section 8.0 of this report (AA) which concluded that there would be no loss, disturbance or damage to any European sites and their constituent QI/SCI habitats or species and that progression a full Appropriate Assessment was not required.

Refer to the following sections of this report for an assessment of potential impacts on p/NHA constituent habitats and species.

Habitats and flora:

No rare or protected plant species or habitats, or scheduled invasive species were identified within the site or environs. There is very limited potential during the ***construction phase*** for significant adverse impacts on habitats and flora in the surrounding area, having regard to the long-established mining and industrial location, the nature and scale of the proposed construction related works, and the separation distances to any further afield sites of interest. This would be subject to the implementation of EIAR and final CEMP construction phase mitigation measures (incl. measures to prevent the release of sediments & historic contaminations into waterbodies, and measures to manage dust and protect air quality). No significant adverse impacts on habitats and flora are anticipated during the ***operational phase***, having regard to the separation distance to any sensitive sites and habitats, the characteristics of the surrounding former mine area, and the modelled dispersal patterns for airborne emissions from the existing and proposed stacks, along with compliance with EPA IE Licence emissions limits (as amended and/or reviewed) for water and air. There would be no significant adverse impacts during the ***decommissioning phase*** subject to the implementation of a similar range of construction phase mitigation measures for the safe removal of equipment.

Birds:

There is potential for minor localised temporary disturbance to birds during the ***construction phase*** resulting from an increase in construction vehicle traffic movements, noise and dust emissions, and from increased airborne emissions during the ***operational phase*** as a result of the proposed increase in energy generation. Several species of bird frequent the surrounding area including the Barn sparrow which was recorded present within the buildings proposed for demolition, and alternative nests opportunities will be provided by way of mitigation The site and environs do not offer optimal nesting or foraging opportunities for any species for which the further afield European sites have been designated. Having regard to the highly industrialised character of the site and environs, and the barren and

contaminated nature of the immediately surrounding former lead and zinc mine lands and tailing ponds, it is unlikely that many species frequent the site on a regular basis. The existing energy facility operates well within its EPA IE emissions level limits, and the EIAR air quality assessments (incl. dispersion modelling) do not predict any exceedance of air quality standards during the operational phase. The localised impacts during the ***decommissioning phase*** would be similar to the construction phase with no significant adverse impacts anticipated.

Bats:

There is potential for minor localised temporary disturbance to bats during the ***construction phase***, resulting from the demolition of buildings and general construction disturbance (incl. noise, dust & lighting). No significant bat activity was identified in the desktop or recorded in the field surveys, and none of the structures are suitable for bat roosts. Having regard to the highly industrialised character of the site and environs, which is also well lit by artificial lighting, and the barren and contaminated nature of the surrounding former lead and zinc mine lands, it is unlikely that bats frequent the site. There would be no significant adverse impacts on bats during the ***construction, operational or decommissioning phases***.

Fisheries & aquatic invertebrates:

There is potential for minor localised temporary disturbance to fish species and aquatic invertebrates during the ***construction phase***, resulting from the unmitigated release of historic mining sediments and contaminants along with accidental spills or leakage of hydrocarbons into ground and surface waters. The increase in construction vehicle movements could also result in accidental fuel spills and leakages. The foundations for some of the structures will be adjacent to or within lands that may contain historic heavy metal waste or contaminated residues, although the OCGT generator would be mainly located on existing made ground to the S whist the relocated structures would be located on disturbed ground to the N. In order to prevent the leakage of historic contaminants and construction related sediments and pollutants to surface and ground water, and hence any nearby watercourses, the excavation works should be subject to a series of site-specific risk assessments, method statements and environmental oversight in line with current guidance. And the subsequent removal of demolition and excavation waste should

be managed by a Construction and Demolition Waste Management Plan (CDWMP) in accordance with the Waste Management Act and associated Regulations. This could be addressed in the final CEMP and included by way of a planning condition. Potentially contaminating construction materials (incl. fuel, oil & concrete) would be stored in bunded areas and spill kits will be available in the event of an accident.

The existing and amended surface water and waste management arrangements would adequately deal with any additional risks during the ***operational phase***, there would be no significant change to the composition of water emissions as a result of the proposed development, and recent tests at the outfalls did not detect the significant presence of any toxic substances in the discharged water. There would be no significant adverse impacts on water quality, aquatic ecology or fisheries subject to compliance with the relevant legislation, the terms and conditions of the EPA IE Licence (as reviewed and/or amended), the implementation of the EIAR and final CEMP mitigation measures, and adherence to any recommended conditions (incl. site-specific risk assessments for excavations).

There would be no significant adverse impacts during the ***decommissioning phase*** subject to the implementation of a similar range of construction phase measures for the safe removal of equipment.

Mammals & other species:

There is potential for minor localised temporary disturbance during the ***construction phase*** to several species of mammal (incl. otter & badgers) and other species (incl. newts) that frequent the surrounding rural area as result of construction noise and any unmitigated deterioration in water quality with resultant impacts on prey species (incl. fisheries) and their predators (incl. otter). However, according to the results of the desktop and field surveys, no significant activity was identified within the immediately surrounding former lead and zinc mining lands, although several species were recorded in the wider rural area. Having regard to the absence of in-stream works, the separation distances to the closest recorded sightings of sensitive species, and to the nature of the works, the proposed development would not have any significant adverse impacts on mammals or other species. There would be no significant adverse impacts during the ***operational or decommissioning phases***.

Conclusion:

Having regard to the nature and scale of the proposed OCGT energy facility, the operation of the existing CCGT energy facility within its EPA IE Licence limits, the existing measures to protect water quality at the discharge points, I am satisfied that the proposed development would not have an adverse impact on ecology or biodiversity (incl. habitats and species), subject compliance with relevant legislation and guidance, implementation of the EIAR and final CEMP mitigation measures, compliance with recommended conditions, and adherence to the terms and conditions of the EPA IE Licence (as reviewed and/or amended). The proposed development would not give rise to any additional significant adverse local or cumulative impacts in-combination with other developments in the surrounding industrial area.

7.8.6 Conclusions

Residual Effects: None predicted.

Cumulative Impacts: Minor impacts may occur in-combination with existing plans and projects within the industrial location, including the existing Tynagh Power Station, but none are predicted to be significant.

Conclusion: I have considered all the written submissions made in relation to biodiversity, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.

7.9 Land, Soil & Water

7.9.1 Project description

The proposed development is described in detail in section 2.2 above. The project would comprise the installation of an OCGT generating plant and associated structures within and adjacent to Tynagh Power Station complex. The power station contains a range of buildings, structures and gas storage facilities related to the generation of electricity. Surface and processed ground waters from the existing facility discharge to a nearby waterbody along the S site boundary via outfalls that are regulated and monitored by the existing EPA IE Licence. This licence would be reviewed and/or amended to accommodate any additional discharge arising from the proposed facility, which would connect into the existing drainage arrangements.

The main elements of the project with the potential to affect land, soil and water during the construction, operational and decommissioning phases include the site preparation and construction works, wastewater treatment and associated site drainage arrangements. The proposed works would take approximately 18-24 months to complete. The facility will operate on a “needs-be” basis for no more than an average of 1,500 hours per year over a 5-year rolling average (in line with EU BAT), to help ensure security of electricity supply during the transition to renewable energy generation. It will have a stated 25-year lifespan and will be decommissioned in c.2049.

7.9.2 Locational context

The proposed development would be located within an undulating rural area to the NW of Tynagh Village. The OCGT plant would be located within and adjacent to the existing Tynagh Power Station compound that occupies a section of the former Tynagh Mines complex, which is surrounded by the remaining lead and zinc mining lands and tailing ponds, with agricultural fields beyond. The mining lands are barren and do not appear to have been remediated or restored after the closure of the mine.

The underlying ***bedrock*** mainly comprises a mix of Carboniferous limestone and shale and there are underlying karst features in the surrounding area. The former

Tynagh Mines sites is a designated County Geological Site (Site Code: GY133) and there are no identified Geohazards in the area. In relation to ***soils***, the existing energy facility is built on Made Ground while the surrounding area is underlain by Till mainly derived from limestone, with alluvium to the N and NE. The lands contain residual mining waste with elevated concentrations of heavy metals (incl. lead, zinc & cadmium).

In relation to ***groundwater***, the surrounding underlying bedrock aquifer is classified as a locally important aquifer (bedrock which is moderately productive only in local zones), and there are several mapped karst features in the wider area (incl. springs, swallow holes, dolines & a turlough). Shallow groundwater was encountered at c.1.5 to 3.0m below ground in shallow wells associated with the construction of the existing power station, which abstracts and treats groundwater from an on-site well (c. 300m_3/day). There are no Source Protection Zones or other groundwater abstraction wells within 1km of the site, although there is a borehole c.1.5km to the S which is used for agricultural and domestic purposes. The underlying WFD Historic Mine (Tynagh) groundwater body has elevated concentrations of heavy metals as a result of the mineralisation of the limestone bedrock and historic mining activities, and its status is classified as Poor by the EPA.

In relation to ***surface waters***, the site is located within the Lower Shannon WFD surface water catchment, and the Lisduff (Kilcrow) - 020 WFD River Sub Basin catchment. There are no natural surface water bodies within the industrial or mining site, although the former open mine pit forms an open water body to the immediate SE, and the tailings ponds are located to the E. There are several small streams in the surrounding area which discharge to Lough Derg c.11km to the S of the site. The Lisduff and Barnacullia streams to the N and S of the site (c.250m) enter the Kilcrow River c.2km to the E, and the culverted Cloonprask and Mill Stream to the N and NE of the site flow into the Barnacullia Stream to the NE of the site (c.400m & 1.5km). Other surface waterbodies in the surrounding area include Cappagh WFD to the SW and the Kilcrow-070 to the S (c.500 & 800m). The WFD/EPA status for the Kilcrow Lisduff (Kilcrow) waterbody is deemed to be Poor and At Risk, whilst the status for the Cappagh and Kilcrow waterbodies are deemed to be Moderate and At Risk. The site is drained by an existing surface water drainage network, and both the treated

groundwater and surface waters discharge to the flooded former open mine pit to the SE (c.50m) via outfalls that are regulated and monitored under the EPA IE licence.

7.9.3 Applicant's submission

EIAR sections 12, 13 and 15, associated Technical Appendices, and the Further Information and unsolicited Further Information responses dealt with water, soils, geology and land. The EIAR described the receiving environment and the existing power station that has been operating since c.2006. It is regulated as a Lower Tier COMAH/Seveso Installation, and it operates within the terms and conditions of its existing EPA IE Licence. It referenced several desk top studies (incl. various heavy metal & water quality reports and mine shaft maps), and site surveys (incl. ground investigation reports), along with the ground water monitoring reports and water quality monitoring tests at the outfalls to the flooded open mine pit to the SE. It referenced the WFD/EPA status for the underlying groundwater bodies and surface waterbodies as mainly Poor and At Risk. It described the proposed energy facility and identified potential impacts on land, soil and water. It did not predict any significant adverse impacts during the construction, operational or decommissioning phases subject to the implementation of the EIAR and final CEMP mitigation measures and compliance with the EPA IE Licence requirements for the facility (as reviewed and/or amended). It noted the need for the excavation works to avoid disturbance to and/or appropriately manage disturbance of historic heavy metal contaminants within the former mining site (incl. lead & zinc).

7.9.4 Policy context

The relevant European, national, regional, and local policies and objectives are set out in section 5.0 above. The current Galway County Development Plan contains several policies and objectives for the protection of soils, geology and ground and surface waters.

7.9.5 Assessment

The Third Party Appellant (An Taisce) and the Observer (Colm Shaughnessy), along with several members of the public (during the application process), raised concerns in relation to potential adverse impacts on land, soil and water, including potential

impacts resulting from disturbance to and release of historic heavy metal pollutants, and instability. The remaining Prescribed Bodies did not raise any further concerns.

There is potential for adverse impacts during the construction, operational and decommissioning phases as a result of the proposed demolition, excavation and construction works, wastewater and surface water drainage arrangements, additional fuel storage facilities, and construction and decommissioning phase traffic movements, along with potential disturbance to and mobilisation of underlying historic heavy metal sediments. The existing facility is located on made-ground within an established industrial area that is occupied by the Tynagh Power Plant, and it is underlain and surrounded by the former lead and zinc mining lands. The EIAR reports confirm that the project would not be located over any underlying karst features of historic mining shafts.

The site and immediate environs do not contain any sensitive habitats or waterbodies. However, several nearby small streams ultimately discharge to Lough Derg (SAC & SPA) c.11km to the S, and there are several further afield sensitive ecological sites in the wider area. Refer to sections 7.7 and 7.8 above for a more detailed assessment of water quality and biodiversity impacts, and Section 8.0 below which provides an Appropriate Assessment screening for European sites.

Land and soil:

The various elements of the proposed development would be located on existing made and/or disturbed ground within and adjacent to the existing power station complex which occupies a long-established industrial location, within a section of a former lead and zinc mine. No works would take place on green field lands. However, it is possible that these areas are underlain by sediments that may be contaminated by heavy metal waste from the former mining activities. The EIAR survey reports confirm that there are no underlying mine shafts or karst features in the vicinity, and I am satisfied that there would be no risk of ground instability. The works would involve the excavation and removal of made ground as well as underlying soil, subsoil and rock during the ***construction phase.*** This could give rise to the unmitigated release and mobilisation of contaminated sediments, along with accidental spills or leakage of hydrocarbons from works vehicles. The excavation

works should be subject to a series of site-specific risk assessments, method statements and environmental oversight in line with current guidance, which could be incorporated into the final CEMP by way of a planning condition. The subsequent storage and removal of demolition, excavation and possibly contaminated waste would be managed by a Waste Management Plan (WMP) in accordance with the Waste Management Act and associated Regulations. Potentially contaminating construction materials (incl. fuel, oil & concrete) would be stored in bunded areas and spill kits will be available in the event of an accident. There would be no significant adverse impacts on land and soil (or surrounding agricultural land) subject to compliance with relevant legislation, implementation of EIAR and final CEMP mitigation measures, and recommended planning conditions related to the excavation works.

During the ***operational phase*** the additional fuel storage facilities could result in accidental spills and leakages to land and soil, which would be managed by EIAR mitigation measures (incl. regular inspections, monitoring & maintenance). There would be no significant adverse impacts on land and soil during the ***decommissioning phase*** subject to the implementation of a similar range of mitigation measures for the safe removal of equipment.

Water quality:

There is potential for localised and temporary disturbance to water quality during the ***construction phase***, resulting from the unmitigated release of historic contaminated mining sediments, along with accidental spills or leakage of hydrocarbons from fuel stores and construction vehicles into ground and surface waters. Most of the structures would be located on made or disturbed ground, however it is likely these areas are underlain by waste from the former lead and zinc mining activities, although I note that there are no underlying karst features or mine shafts in the vicinity. In order to prevent the leakage of historic heavy metal contaminants and construction related sediments and pollutants to surface and ground water, and hence any to nearby waterbodies, the excavation works should be subject to a series of site-specific risk assessments as previously outlined above, and the storage and removal of demolition and excavation waste would be managed by a Waste Management Plan (WMP). Potentially contaminating construction materials (incl.

fuel, oil & concrete) would be stored in bunded areas and spill kits will be available in the event of an accident. The installation of additional fuel storage structures and the increase in construction phase vehicle movements could also result in accidental fuel spills and leakages, which would be managed by a suite of mitigation measures (incl. adherence to the final CEMP & best construction practice). There would be no significant adverse impacts on water quality or WFD status for the nearby or downstream waterbodies during the construction phase subject to compliance with relevant legislation, adherence to best construction practice, implementation of the EIAR and final CEMP mitigation measures, and compliance with recommended conditions.

During the ***operational phase***, the additional fuel storage facilities could also result in accidental spills and leakages, which would be managed by mitigation measures (incl. regular inspections, monitoring & maintenance). The existing (and upgraded) wastewater treatment and surface water drainage arrangements would adequately deal with any risks to water quality. Regular tests at the discharge outfalls did not detect the presence of any toxic substances in the discharged water, and there would be no significant change to the composition of water emissions as a result of the proposed development. There would be no significant adverse impacts on water quality or WFD status for the nearby or downstream waterbodies during the operational phase subject to compliance with relevant legislation, the terms and condition of the EPA IE Licence (as reviewed and/or amended), the implementation of the EIAR and final CEMP mitigation measures, and adherence to any recommended conditions (incl. site-specific risk assessments for excavations).

There would be no significant adverse impacts during the ***decommissioning phase*** subject to the implementation of a similar range of construction phase measures for the safe removal of equipment.

Drainage and flood risk

The Flood Risk Assessment report contained in EIAR Appendix 12 confirmed that the proposed development would be at a far remove from the River Shannon floodplain (c.17km), it would not be at risk from fluvial or groundwater flooding, have any significant adverse impacts on drainage, or give rise to a flood risk within or

downstream of the proposed facility, having regard existing on-site drainage arrangements and the location of the facility within an existing industrialised site. The applicant's Further Information response confirmed that site did not lie within the zone of influence for a recurrent flood event along a nearby watercourse. I am satisfied that the project would not give rise or contribute to a risk of flooding.

7.9.6 Conclusions

Residual Effects: None predicted.

Cumulative Impacts: Minor impacts may occur in-combination with existing plans and projects within the industrial location, including the existing Tynagh Power Station, but none are predicted to be significant.

Conclusion: I have considered all the written submissions made in relation to land, soil and water, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.

7.10 Material Assets

7.10.1 Project description

The proposed development is described in detail in section 2.2 above. The project would comprise the installation of an OCGT generating plant and associated structures within and adjacent to Tynagh Power Station complex. The power station contains a range of buildings, structures and gas storage facilities related to the generation of electricity, Sperrin Galvanisers is located to the immediate W, and the shared vehicular access to the site is off the local Tynagh Road to the W. The construction phase would give rise to additional traffic movements, with no discernible change during the operational phase. The proposed facility would be connected to the existing ground water supply and the surface drainage arrangements which discharge to a nearby waterbody (flooded former mine pit), and are monitored by the existing EPA IE Licence for the power station, which would be reviewed and/or amended.

7.10.2 Locational context

The site and surroundings are described in detail in section 1.4 above. The proposed OCGT generator would be located within and adjacent to the existing Tynagh Power Station which occupies a section of the former Tynagh Mines, and Sperrin Galvanisers is located to the immediate W. Tynagh Village is located to the SE and there are several detached dwelling houses, farm buildings and an equestrian centre in the surrounding area. Vehicular access to the site is via the M6, N56, L-4310, and the existing entrance to the W. The site is connected to an existing ground water abstraction supply and drained by an existing surface water drainage network.

7.10.3 Applicant's submission

EIAR sections 14, 15 and 17, associated Technical Appendices and the Further Information and unsolicited Further Information responses dealt with traffic, land use and material assets. The EIAR described the receiving environment (incl. the road network & environmental services) and the existing operational energy facility. It noted that the existing facility occupies existing industrial and former mining lands, and several desktop studies and traffic surveys were undertaken. It described the

proposed movement, access, and service arrangements. It did not predict any significant adverse impacts on material assets, including on the road network, services, public utilities or wate management during the construction, operational or decommissioning phases.

7.10.4 Policy context

The relevant European, national, regional, and local policies and objectives are set out in section 5.0 above. The current Galway County Development Plan contains polices for the provision, utilisation and protection of public utilities and traffic management.

7.10.5 Assessment

The Third Party Appellant (An Taisce) and the Observer (Colm Shaughnessy), along with several members of the public (during the planning application process), raised concerns in relation to potential adverse impacts on material assets, including potential impacts related to the use of natural gas and traffic disturbance. The remaining Prescribed Bodies did not raise any further concerns. There is potential for adverse impacts on material assets associated with construction, operational and decommissioning related traffic movements, and amendments to the surface drainage network during the operational phase. The facility is situated within long established industrial lands, the existing energy facility is connected to the local, regional and national road network, it is served by an existing ground water supply, wastewater treatment system, surface water drainage, power supply and telecommunications networks, whilst also supplying power to the national grid.

Traffic:

There is potential minor localised impacts on the road network and traffic safety related to the movement of additional construction related vehicles during the ***construction and decommissioning phases***. The national, regional and local road network has sufficient capacity to assimilate the increase in traffic volumes associated with these phases of the development and the road network (incl. junctions) would continue to operate safely within their capacities. I am satisfied that the additional traffic movement would not give rise to any significant congestion,

delays, disruption or hazards along any national, regional, or local roads, or at any of the main junctions with the road network. The project would not give rise to a traffic hazard or endanger the safety of other road users during any of these phases. The proposed development would not give rise to any significant adverse local or cumulative traffic impacts in-combination with other developments in the surrounding and wider area, with no adverse impacts on this asset anticipated. There would be no significant adverse or discernible impacts during the ***operational phase*** having regard to the nature of the operations.

Water supply:

Water supply to the site is via ground water abstraction (c.300m3/day under an Abstraction Licence), and it is used for general and firefighting purposes. There would be some limited potential for additional water use during the ***construction phase*** which would be short term and temporary, with no significant adverse impacts anticipated subject to compliance with EIAR and final CEMP mitigation measures. There will be no significant additional water consumed as part of the energy generating processes during the ***operational phase*** with no potential for significant adverse impacts on water supply. Firefighting water will be stored in an on-site tank (c.1,000m3) to the W of the OCGT facility. There would be no discernible change to water usage during the ***decommissioning phase***. There is little potential for any significant adverse impacts on water supply assets.

Drainage:

The processed groundwater and surface water drainage for the existing power plant ultimately discharges to a nearby waterbody (flooded former mine pit) to the SE of via an on-site treatment system and outfalls which are regulated and monitored under an existing EPA IE Licence, which would be reviewed and/or amended. The existing arrangements within the site would be amended and augmented to accommodate the proposed development. The proposed development would not have any significant long-term effects on the existing drainage network asset during ***any of the phases***, subject to compliance with relevant EIAR and final CEMP mitigation measures, and the terms and conditions of the EPA IE Licence (as reviewed and/or amended).

Gas supply:

There will be an increase in the use of natural gas to fuel the proposed OCGT power plant which is a non-renewable asset, and the on-site storage tanks will contain up to c.6,000m_3 of distillate fuel. The facility would operate in compliance with the terms and conditions of the existing EPA IE Licence (as reviewed and/or amended). The proposed facility will operate on a "needs-be" basis for no more than an average of 1,500 hours per year over a stated 5-year rolling average (in line with EU BAT), to help ensure security of electricity supply during the transition to renewable energy generation, and the resulting impacts would not be significant and will diminish over the 25-year lifespan as the transition to renewables gains progresses.

Waste management:

Construction and demolition waste arising from the proposed development would be managed in accordance with all relevant waste management regulations. Additional site-specific testing should take place to check for the presence of residual heavy metal mining waste, which should in turn, be managed in accordance with relevant waste management legislation and guidance. All of these concerns should be addressed in the final CEMP with the agreement of the planning authority.

7.10.6 Conclusions

Residual Effects: None predicted.

Cumulative Impacts: Minor impacts may occur in-combination with existing plans and projects within the industrial location, including the existing Tynagh Power Station, but none are predicted to be significant.

Conclusion: I have considered all the written submissions made in relation to land, soil and water, in addition to those specifically identified in this section of the report. I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.

7.11 Cultural Heritage

7.11.1 Project description

The proposed development is described in detail in section 2.2 above. The project would comprise the installation of an OCGT generating plant within the existing Tynagh Power Station site. The main elements of the project, which are summarised in 2.2 above and some of the existing structures would be demolished. The haul route for construction vehicles and the delivery route for distillate fuel would be via the M6 or M7, the N65 to the N of the site and the L4310 to the W.

7.11.2 Locational context

The proposed development would be located to the NW of Tynagh Village. The proposed OCGT generating plant would be located within the existing Tynagh Power Station site that occupies a section of the former Tynagh Mines complex, which is surrounded by agricultural fields. There are some features of archaeological interest in the vicinity that are scheduled for inclusion in as Recorded Monuments (incl. ringforts enclosures). There are several features of cultural heritage interest in the surrounding area and along the local road network. These include a Thatched Cottage (RPS 3648) and a Post Box (RPS 3647) which are located along the L4310 to the S of the site. The entrance gates to Rathmore House (RPS 3657) are located to the NE of the site along the N65, Ryans Public House (RPS 332) is located the junction of the N65 with the L4310, and Castletown Bridge (RPS 3651) is located along the L4310 to the N of the site.

7.11.3 Applicant's submission

EIAR section 8, associated Technical Appendices and the Further Information response dealt with cultural heritage and archaeology. The EIAR described the receiving environment which is located within a former mining site industrial area. It noted that there are no Recorded Monuments (RM) in the surrounding area, and that there are several features of interest in the vicinity including 4 x Protected structures within 1km of the site and/or along the haul route. The EIAR did not predict any significant adverse impacts on cultural heritage during the construction, operational

or decommissioning phases of the development, other than some temporary minor disturbance impacts along the haul route during the construction works.

7.11.4 Policy context

The relevant European, national, regional, and local policies and objectives are set out in section 5.0 above. The current Galway County Development Plan contains a variety of policies for the protection of archaeology and cultural heritage. The site and its immediate environs are not covered by any sensitive archaeological designations although the Plan acknowledges the possible presence of subsurface artefacts. The site does not contain any Protected Structures although there are several features of heritage interest in the wider area which the Plan seeks to protect where possible. The site and environs are not covered by any sensitive designations, although the former Tynagh Mines site is a designated County Geological Site (Site Code: GY133).

7.11.5 Assessment

No substantive concerns were raised in relation to archaeology or cultural heritage. The Council's Conservation Officer had no objection to the proposed development subject to a condition requiring the monitoring of traffic vibration impacts at some of the Protected Structures (incl. Castletown Bridge & the Thatched House).

Given the highly disturbed and industrialised nature of the site and environs and the previous extensive mining operations, it is unlikely that the site contains any features of archaeological or cultural heritage, other than the designation of Tynagh Mine as a County Geological Site. There is no potential for impacts on archaeology during the ***construction*** phase related to the proposed demolition and site excavation works. There some potential for adverse impacts on Protected Structures along the haul route during the construction phase resulting from the transit of heavy construction related vehicles, and during the ***operational phase*** from the delivery of distillate fuel to the energy facility along the surrounding road network (incl. noise, dust and vibration). It is noted that Castletown Bridge (RPS 3651) which is located along the L4310 to the N of the site, has been by-passed and vehicles would not cross over it.

I am satisfied that the proposed development would not have an impact on the character or setting of any nearby Protected Structures. However, the final CEMP should include a traffic management plan and provide for the monitoring of traffic vibration impacts at nearby Protected Structures, and the surrounding road network should be kept free from construction related dust. This could be addressed by way of a planning condition. There is limited potential for impacts during the ***decommissioning phase***, subject to the implementation of a similar range of operational phase mitigation measures and conditions. The proposed development would not have an adverse impact on the character or setting or any other features of cultural heritage value in the wider area.

7.11.6 Conclusions

Residual Effects: None predicted.

Cumulative Impacts: None predicted.

Conclusion: No submissions were made in relation to cultural heritage. I have identified the relevant issues in this section of the report, and I am satisfied that they have been appropriately addressed in terms of the application and that no significant adverse effect is likely to arise.

7.12 Cumulative Impacts

Several projects are being progressed in the wider area (incl. energy, industrial, agricultural & small scale residential developments). Having regard to the nature and scale of these projects and the transitionary nature of the proposed development which would operate intermittently, as and when needed, I am satisfied that the issue of significant cumulative effects does not arise. There is, therefore, nothing to prevent the granting of approval on the grounds of cumulative effects.

7.13 Interactions and Interrelationships

I have also considered the interrelationships between the key receptors and whether this might as a whole affect the environment, even though the effects may be acceptable when considered on an individual basis. In particular, the potential arises for the following interactions and interrelationships.

Population and human health:

- Noise and dust
- Air quality and climate
- Roads and traffic (air quality, safety & disturbance)

Air & climate

- Noise and dust
- Roads and traffic (emissions)
- Population and Human Health

Landscape

- None noted.

Biodiversity:

- Hydrology (water quality & fisheries)
- Air quality (airborne emissions)

Land, Soil and Water:

- Biodiversity (terrestrial & aquatic)
- Population & Human Health

Material Assets and Cultural Heritage:

- Population & human health
- Roads and traffic (disturbance & safety)

In conclusion, I am satisfied that any such impacts can be avoided, managed, and mitigated by the EIAR measures and any recommended planning conditions.

7.14 Risks associated with major accidents and/or disasters

Any additional risks associated with major accidents or disasters at the Seveso site have been identified and the potential impacts associated with climate change have been factored into the consideration of the proposed electricity generator in the EIAR and Further Information and Unsolicited Further Information responses. The proposed energy generating facility would operate in accordance with the terms and conditions of the EPA Industrial Emissions Licence, as amended and/or reviewed. The proposed energy generating facility also relates to a Lower Tier COMAH establishment at the existing Tynagh Power Station, it falls under the requirements of the Control of Major Accident Hazard (COMAH) Regulations 2015. The Health and Safety Authority (HSA) is satisfied that the project comprises a change to an existing COMAH site rather than the creation of a new installation. The applicant's Land Use Planning Risk Assessment report (submitted as unsolicited Further Information) determined the level of risk that that would be presented by the new development in the context of a Major Accident scenario (incl. the impact on the surrounding environs). It concluded that the project satisfies the risk-based criteria that are set out in the relevant HSA guidance. The HSA had no objection to the proposed development following the receipt of this Further Information.

7.15 Reasoned Conclusion

Having regard to the examination of environmental information contained above, including the EIAR and the submissions from the Third Party and Prescribed Bodies, it is considered that the main significant direct and indirect effects of the proposed development on the environment have been identified in section 7.0 of this report.

It is considered that the main significant direct and indirect impacts of the proposal on the environment are as follows.

- The proposed development would give rise to an increase in greenhouse gas emissions from the chimney stack with resulting ***climate impacts*** and on the achievement of EU and National climate change and carbon emission reduction targets during the operational phase. However the impact on the environment would not be significant in the long-term having regard to the transitionary nature of the facility which would only operate intermittently, as and when needed, and for no more than an average of 1,500 hours per annum over a stated 5-year rolling average (in line with EU BAT), and having regard to national policy in relation to the generation of up to 2GW of energy from natural gas and distillate fuels in the intervening period whist the switch to renewables gains momentum.
- The proposed development would give rise to an increase in airborne emissions from the chimney stack with resulting ***air quality impacts*** during the operational phase, however the impact on the receiving environment would not be significant subject to adherence to the emission limit levels set by the EPA Industrial Emission Licence.
- The project could give rise to minor localised impacts on ***residential amenity, cultural heritage*** and the surrounding ***road network*** during construction phase (general disturbance, noise, dust & vibration from increased traffic movements & airborne emissions). These impacts would be mitigated by the implementation of measures to manage construction activities and traffic movements.

- The project could give rise to minor impacts on ***biodiversity*** during the construction phase (incl. noise, dust, traffic, airborne emissions, release & mobilisation of historic heavy metal contaminants and water discharges). These impacts would be mitigated by the implementation of measures to manage the construction activities. Disturbance during the operational phase is not likely to arise given the industrial location within and adjacent to an existing electricity generating site, which is located within a former mining complex, and the separation distances between the development and sensitive receptors and further afield European sites.
- The project could give rise to minor impacts on ***hydrology*** as a result of the release and mobilisation of sediments and historic heavy metal contaminants, accidental spillages of chemicals, hydrocarbons or other contaminants entering watercourses. These impacts would be mitigated by the implementation of measures to manage the excavation and construction works, surface water discharges from the site which will be directed through the existing drainage systems prior to discharge, and adherence to the emission limit levels set by the EPA Industrial Emission Licence.

In ***conclusion***, having regard to the above identified significant effects, I am satisfied that the proposed development would not have any unacceptable direct or indirect impacts on the environment, subject to the implementation of the mitigation measures, any recommended conditions, and adherence to the terms and conditions of the EPA Industrial Emission Licence.

8.0 Appropriate Assessment

8.1 Introduction

The main concerns raised by the submissions from the Third Party and Observer, and the Prescribed Bodies and the members of the public (during the planning application process), are summarised in sections 3.0 and 4.0 of this report. The Section 7.8 EIA Biodiversity Assessment should be read in conjunction with this assessment.

8.2 The AA Screening Report

The AA Screening report (as amended by way of the FI response) described the site and receiving environment, the characteristics of the existing facility and proposed development, and it referenced the EPA IE Licence and associated monitoring reports. It utilised the results of several environmental, ecological and hydrological desk top studies and field surveys. It summarised the legislative requirements, described the AA screening methodology, identified the European sites within a 15km radius of the site, and described the likely sources of impact arising from the various project elements. The report screened out all of these sites and concluded that they would not be affected by the proposed development because of the nature and scape of the works, the separation distances and the absence of any direct connections to European sites, that the preparation of an NIS was not required.

8.3 Stage 1 AA Screening Assessment

The proposed development would not be located within an area covered by a European site designation, and it is not relevant to the maintenance of any such European site. There are several European sites located within 15km and/or the Zone of Influence, and the Qualifying Interests, Special Conservation Interests and approximate separation distances are listed below.

European sites	Qualifying Interests (QIs)	Distance
Ardgraigue Bog SAC	Active raised bogs Degraded raised bogs Depressions on peat substrates	c.8km E
Barroughter Bog SAC	Active & Degraded raised bogs Depressions on peat substrates	c.10km SE c.17km aquatic
Lough Derg NE Shore SAC	Juniperus communis formations Calcareous & Alkaline fens Limestone pavements & Alluvial forests Taxus baccata woods of the British Isles	c.11km SE c.19km aquatic
Pollnaknockaun Wood Nature Reserve SAC	Old sessile oak woods	c.11km S
Rosturra Wood SAC	Old sessile oak woods	c.11km S
Lough Rea SAC	Hard oligo-mesotrophic waters	c.12km W
Cloonmoylan Bog SAC	Active & degraded raised bogs Depressions on peat substrates Bog woodland	c.12km S
Derrycrag Wood Nature Reserve SAC	Old sessile oak woods	c.13km S
River Shannon Callows SAC	Molinia & Lowland hay meadows Alkaline fens & Alluvial forests Limestone pavements & Otter	c.14kmE

European sites	Special Conservation Interests (SCIs)	Distance
Slieve Aughty Mountains SPA	Hen Harrier & Merlin	c.7km SW
Lough Derg Shannon SPA	Cormorant, Tufted Duck & Goldeneye Common Tern, Wetland and Waterbirds	c.11km SE c19km aquatic
Lough Rea SPA	Shoveler & Coot, & Wetland and Waterbirds	c.12km W
Middle Shannon Callows SPA	Whooper Swan, Wigeon & Corncrake Golden Plover, Lapwing & Black-tailed Godwit Black-headed Gull, & Wetland and Waterbirds	c. 14km E

Conservation Objectives:

- To maintain or restore the favourable conservation condition of the Annex 1 habitat(s) and/or the Annex 11 species for which the SACs have been selected.
- To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for the SPAs.
- To maintain or restore the favourable conservation condition of the wetland habitat at several SPAs as a resource for the regularly-occurring migratory waterbirds that utilise them.

The potential effects relate to:

- Release & transport of air borne pollutants to the European sites via chimney stacks and traffic related emissions.
- Release & transport of sediments, pollutants and historic contaminants flowing into the European sites via the surface water drainage system.
- Ex-situ impacts on qualifying species outside the European sites but which are an integral and connected part of the population of QI species.
- Loss of/or damage to habitat/resting/foraging used by QI/SCI species.
- Loss of foraging lands for mammals and interference with flight lines of bird species associated with the European sites, or mortality related to collision with tall structures.
- Noise and disturbance to QI/SCI species during construction & operation.

Potential likely significant effects relate to:

- ***Lough Derg NE Shore, River Shannon Callows, Pollnaknockaun Wood Nature Reserve, Derrycrag Wood Nature Reserve, Cloonmoylan Bog, Rosturra Wood, Barroughter Bog, Ardgraigue Bog, Loughatorick South Bog & Lough Rea SACs:*** These SACs are located between c.7km and c.15km of the appeal site and they are designated for a variety of habitats (incl. bogs, fens, woodland, limestone pavements & waterbodies) and one species (Otter). Having regard to the nature and scale of the works required to install and operate the OCGT facility, the quality of the immediately adjacent

former mine lands and tailing ponds, and the characteristics of the surrounding lands which are in agricultural use, the separation distance between the proposed OCGT facility and these European sites, the nature of the Qualifying Interests for each site, the mainly Poor and At Risk status of the surrounding waterbodies, and the absence of a downstream aquatic connection to any of the sites over a reasonable distance, it is highly unlikely that the proposed development would have an adverse effect on these SACs or their Conservation Objectives.

- ***Slieve Aughty Mountains, Lough Derg Shannon, Middle Shannon Callows & Lough Rea SPAs:*** These SPAs are located between c.7km and 15km of the appeal site and they are designated for a variety of bird species (incl. Waterbirds, Hen harrier & Merlin). Having regard to the nature and scale of the work required to erect and operate the OCGT facility, the results of the bird surveys, the poor quality of the immediately adjacent former mine lands and tailing ponds, the characteristics of the surrounding lands which are in agricultural use which do not offer optimal foraging opportunities for the SCI species, the separation distance between the proposed energy facility and the European sites, and the nature of the Special Conservation Interests for each site, it is highly unlikely that the proposed development would have an adverse effect on these SPAs, their SCI species or their Conservation Objectives.

In-combination impacts: The concerns raised in relation to such impacts are noted. Having regard the scale and nature of the proposed development, I am satisfied that the proposed OCGT would not act in-combination with any other plans or projects (other than the existing CCGT plant) in a way that would give rise to an adverse impact on any European sites in the surrounding area. I am satisfied that this concern would not warrant the progression to a full Appropriate Assessment.

Conclusion:

Based on my examination of the AA Screening report and supporting information (incl. the desktop studies, field surveys & hydro-geological reports), NPWS website, aerial and satellite imagery, the scale of the proposed works and nature of potential the likely effects, the substantial separation distance and functional relationship between the proposed works and the European sites and their conservation objectives, the site specific characteristics and requirements, and the absence of a direct aquatic connection, taken in conjunction with my assessment of the subject site and surrounding area, I conclude that a Stage 2 Appropriate Assessment is not required, and the European sites can be screened out of any further assessment.

8.4 AA Screening Conclusion

In conclusion, having regard to the nature and scale of the proposed development, to the separation of the proposed development sites from the European sites, to the nature of the qualifying interests, special conservation interests and conservation objectives of the European sites, and to the available information as presented in the submitted documents regarding habitats, species, ground and surface water pathways between the application site and the European sites and other information available, it is my opinion that the proposed development does not have the potential to affect any European sites having regard to the conservation objectives of the relevant site, and that progression to a Stage 2 Appropriate Assessment is not required.

9.0 RECOMMENDATION

I recommend that the application for the construction of the Open Cycle Gas Turbine power plant (299MW) and associated infrastructure and buildings should be granted planning permission for the reasons and considerations as set out below, subject to compliance with the attached conditions.

10.0 REASONS AND CONSIDERATIONS

Having regard to:

a. the National Planning Framework Plan 2018-2040,
b. the National Development Plan 2021-2030,
c. the Climate Action Plan 2021,
d. the Policy Statement in the Security of Electricity Supply 2021,
e. the National Energy Security Framework 2022,
f. the Regional Spatial and Economic Strategy for the Northern & Western Region 2020-2032,
g. the policies of the planning authority as set out in the Galway County Development Plan 2022-2028,
h. the distance to dwellings or other sensitive receptors,
i. the submissions made in connection with the application,
j. the likely consequences for the environment and the likely significant effects of the proposed development on European Sites,
k. the Screening for Appropriate Assessment and Environmental Impact Assessment reports and recommendations of the Inspector,

Proper planning and sustainable development:

It is considered that subject to compliance with the conditions set out below, the proposed development would accord with European, national, regional and local planning and related policy, be consistent with the obligations of the Climate Action and Low Carbon (Amendment) Act 2021, it would not have an unacceptable impact on the landscape or ecology, it would not seriously injure the visual or residential amenities of the area or of property in the vicinity, and it would be acceptable in terms of traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Likely Effects on the Environment / Environmental Impact Assessment:

The Board completed an environmental impact assessment of the proposed development taking account of:

(a) the transitionary nature of the proposed development which will operate as and when needed to ensure security of electricity supply,

(b) the scale and location of the proposed development within a long established industrial and energy generating site, which occupies a former mining complex,

(c) the Environmental Impact Assessment Report (EIAR) and associated documentation submitted in support of the application,

(d) the Screening for Appropriate Assessment and associated documentation submitted in support of the application,

(e) the planning authority reports, and the submissions received from the Appellant, Observer and Prescribed Bodies, and

(f) the Inspector's report.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development, and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment. The Board agreed with the examination, set out in the Inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made in the course of the application.

The Board considered that the main ***significant direct and indirect effects*** of the proposed development on the environment are, and would be mitigated, as follows:

- Negative impacts on **climate** during the operational phase. The increase in greenhouse gas emissions from the chimney stack would have a negative impact on climate and the achievement of EU and National climate change and carbon emission reduction targets. The impacts would be mitigated in the long-term as a result of the transitionary nature of the facility which would operate intermittently for no more than an average of 1, 500 hours per annum.
- Negative impacts on **air and climate** during the operational phase. The increase in airborne emissions from the chimney stacks and resulting air quality impacts would be mitigated by adherence to the emission limit levels set by the EPA Industrial Emission Licence.
- Negative impacts on **human health and population, air and climate, biodiversity** and **cultural heritage** arising from construction activities include noise, dust, traffic emissions and traffic disturbance. These impacts will be mitigated through adherence to best practice construction measures and the implementation of a Construction and Environmental Management Plan and a Waste Management Plan. Noise disturbance from the operation of the facility is not likely to arise given the established industrial location, and the separation distances between the development and noise sensitive receptors which include surrounding detached dwelling houses.

- Negative impacts on **hydrology** could arise as a result of the release and mobilisation of sediments and historic heavy metal contaminants, accidental spillages of chemicals, hydrocarbons or other contaminants entering watercourses, and mitigation measures are proposed to protect ground and surface water and manage surface water within the site. Discharge of surface water will be directed through the existing storm and foul drainage systems prior to discharge. Impacts will be mitigated by measures outlined within the application and by adherence to the terms and conditions of the EPA Industrial Emission Licence.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures proposed, and subject to compliance with the conditions set out below, the effects of the proposed development on the environment, by itself and in combination with other plans and projects in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions of the Inspector.

Appropriate Assessment Screening:

The Board completed an Appropriate Assessment screening exercise in relation to the potential effects of the proposed development on European Sites, taking into account the nature and scale of the proposed development on serviced lands, the nature of the receiving environment which comprises an industrial area and former mine, the distances to the nearest European sites and the hydrological pathway considerations, submissions on file, the information submitted as part of the applicant's Appropriate Assessment screening documentation and the Inspector's report. In completing the screening exercise, the Board agreed with and adopted the report of the Inspector and that, by itself or in combination with other development, plans and projects in the vicinity, the proposed development would not be likely to have a significant effect on any European Site in view of the conservation objectives of such sites, and that a Stage 2 Appropriate Assessment is not, therefore, required.

11.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the Further Information and unsolicited Further Information received by the planning authority on the 18th day of February 2022 and 14th March 2022, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.
   Reason: In the interest of clarity.

2. The mitigation measures identified in the EIAR and other plans and particulars submitted with the planning application, shall be implemented in full by the developer, except as may otherwise be required in order to comply with the conditions of this permission.
   Reason: In the interest of clarity and protection of the environment during the construction and operational phases of the proposed development.

3. For the avoidance of doubt: -
   (a) The output from the proposed Open Cycle Gas Turbine shall be a maximum of 299MW.
   (b) The operational lifespan the proposed Open Cycle Gas Turbine shall be 25 years, after which the facility shall be decommissioned, and the site reinstated in accordance with Condition no.4 below.
   Reason: In the interest of clarity and the proper planning and sustainable development of the area.

4. Prior to commencement of development the developer shall submit for the written agreement of the planning authority detailed plans and proposals for the restoration and reinstatement of the entire site following decommissioning of the plant. The restoration works shall be completed within two years of the closure of the plant site or cessation of use for a period or one year or more.
   Reason: To ensure the satisfactory restoration of the site.

5. The services of a suitably qualified and experienced Ecological Clerk of Works shall be retained to oversee and supervise the entirety of the construction works, and to provide monthly electronic reports to the planning authority (Planning and Environment Sections) detailing the stage of the works, and compliance with EIAR and CEMP mitigation measures.
   Reason: In the interest of protecting ecology and wildlife in the area.

6. Unless otherwise agreed in writing with the planning authority, a fixed red obstacle light shall be fitted as close to the top of the main stack as practicable and shall be visible from all angles in azimuth. Details to be agreed in writing with the planning authority before development commences.
   Reason: In the interest of air traffic safety.

7. All plant and machinery used during the works should be thoroughly cleaned and washed before delivery to the site to prevent the spread of hazardous invasive species and pathogens.
   Reason: In the interest of the proper planning and sustainable development of the area, and to prohibit the spread of invasive species.

8. Water supply and drainage arrangements, including the treatment of wastewater, attenuation and disposal of surface water and connection to the existing drainage system, shall comply with the requirements of Irish Water and the planning authority for such works and services as appropriate.
   Reason: In the interest of public health and to ensure a proper standard of development.

9. The construction of the development shall be managed in accordance with a Construction and Environmental Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of : - intended construction practices, including hours of working, noise, vibration and dust management measures; traffic management and protection of roads and bridges; storage of hydrocarbons, chemicals and liquids; site specific testing and monitoring for heavy metal contaminants; and off-site disposal of construction, demolition and contaminated waste, which shall be managed in accordance with an agreed Construction and Demolition Waste Management Plan.
   Reason: In the interests of public safety and residential amenity.

10. Prior to commencement of development, a transport management plan for the construction stage shall be submitted to, and agreed in writing with, the planning authority. The traffic management plan shall incorporate details of the road network to be used by construction traffic, including over-sized loads, and detailed arrangements for the protection of bridges, culverts or other structures to be traversed, as may be required. The plan should also contain details of how the developer intends to engage with and notify the local community in advance of the delivery of oversized loads.
    Reason: In the interest of traffic safety.

11. Site development and building works shall be carried out only between the hours of 0700 to 1900 Mondays to Fridays inclusive, between 0700 to 1300 hours on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority.
    Reason: To safeguard the residential amenities of property in the vicinity.

12. The site development and construction works shall be carried out such a manner as to ensure that the adjoining roads are kept clear of debris, soil and other material and cleaning works shall be carried on the adjoining public roads by the developer and at the developer's expense on a daily basis.
    Reason: To protect the residential amenities of property in the vicinity.

13. Prior to commencement of development, the developer shall lodge with the planning authority a bond of an insurance company, a cash deposit, or other security to secure the provision and satisfactory completion of the development, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory completion of any part of the development.
    Reason: To ensure the satisfactory completion of the development.

14. Prior to commencement of development, the developer shall lodge with the planning authority a one hundred thousand euro (E100,000) bond of an insurance company, a cash deposit, or other security to secure the reinstatement of the affected road which may be damaged by the transport of materials to the site (i.e from the junction of the L-4310 local road and the N65 national secondary road to the site entrance), coupled with an agreement empowering the relevant planning authority to apply such security or part thereof to the satisfactory reinstatement of the public road.
    Reason: To ensure the satisfactory completion of the development.

15. The developer shall pay to the planning authority a financial contribution of thirty-six thousand, one hundred and two euros and seventy-eight cent (E36,102.78) respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000. The contribution shall be paid prior to the commencement of development or in such phased payments as the planning authorities may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to the Board to determine the proper application of the terms of the Scheme.
    Reason: It is a requirement of the Planning and Development Act 2000 that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

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Karla Mc Bride

Senior Planning Inspector

2nd December 2022